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GEORGIA MANUFACTURING ATLAS

REVIEW

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INDUSTRIAL DEVELOPMENT DIVISION/ENGINEERING EXPERIMENT STATION/GEORGIA INSTITUTE OF TECHNOLOGY

GEORGIA MANUFACTURING ATLAS

by

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Foreword

This "atlas" of Georgia manufacturers was conceived as the first of a series of special reports designed to amplify and supplement information contained in the new Georgia Manufacturing Directory prepared by the Industrial Development Branch and published by the Georgia Department of Commerce last year.

It is hoped that the Atlas will prove useful to many individuals and groups interested in knowing where various types of manufacturing are concentrated in Georgia and the manner in which various industries are distributed throughout the State. It was also designed to provide basic information for use in the Branch's own market research program. In addition to providing a ready graphic presentation of various industries and their concentrations, the study is expected to be used as a basis for identifying opportunities to develop "satellite" industries to supply materials and parts to those industries already established in Georgia.

Other studies are planned to provide additional information and to periodically revise the Atlas. The next report scheduled to be completed will summarize and analyze the new industries attracted to Georgia during calendar 1962. This information will provide the basis for updating the manufacturing directory.

Questions and comments regarding the Atlas are invited.

Kenneth C. Wagner, Head
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Introduction

If it were possible to take an overall aerial view of Georgia, what kind of picture of industrial development would be seen? Where is each type of manufacturing activity concentrated? Which counties have virtually no manufacturing within their boundaries? How diversified are Georgia's manufacturing operations? Which industries have only minor representation in the State?

The series of maps (Section II) which is the heart of this publication is background for answering these and related questions. To the researcher bent upon explaining the location of Georgia's industrial activity, it is basic information in graphic form. Although no theory is offered in the publication itself, some principles of industrial location become obvious from even a casual study of the manufacturing maps. Note, for example, the vast difference between locational patterns for grain mills, small in size and widespread in location, and the automobile industry with all of its activity concentrated in the Atlanta area. One is tied to local consumer markets and the other to the area that not only minimizes transportation costs, but also provides a large population base with its accompanying plentiful supply of skilled workers and numerous suppliers and services, which are necessary for large-scale, heavy manufacturing operations.

The Georgia Manufacturing Atlas is intended primarily for manufacturers who are concerned with locating or expanding facilities and local industrial development groups who are interested in measuring their competitive positions with those of other areas in the State. It is a useful tool for a quick reconnaissance -- a sizing up of the competitive situation in a preliminary fashion. Existence of suppliers, skills, complementary operations and the like are apparent in a great many cases, although a more intensive study of even these facets will often be needed. Local development agencies will also be able to determine at a glance whether or not their own industrial activities can be complemented by those of their neighbors or vice versa. This could hopefully result in bringing together several counties to work together in promoting industrial development on a regional basis as is currently being done in the Coosa Valley area.

The Atlas is divided into two sections. Section I, an overview, includes a comparison of Georgia's manufacturing with that of the nation and the

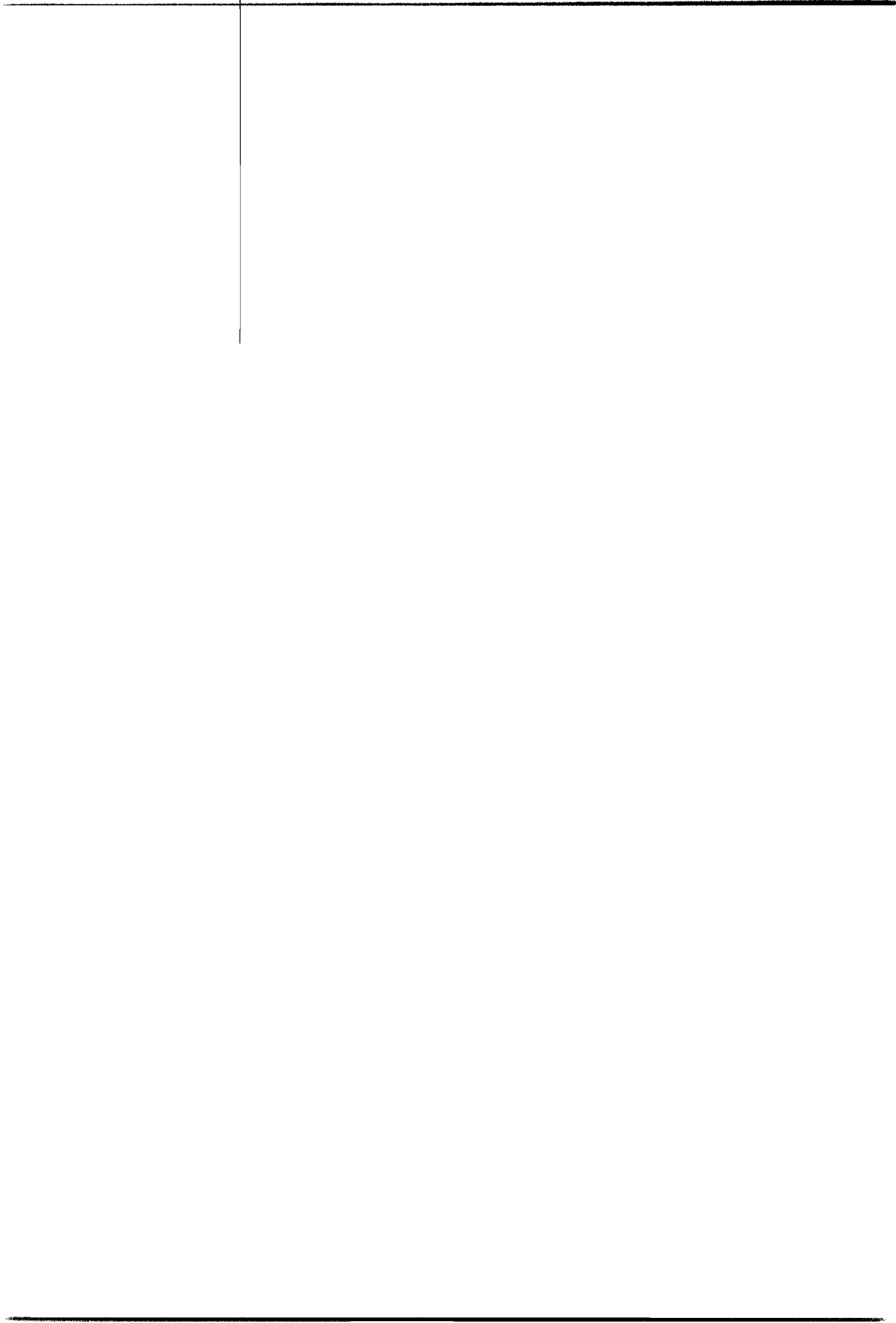
southeastern region, which includes Alabama, Florida, Georgia, North and South Carolina, and Tennessee. In addition to these comparisons, a generalized picture of manufacturing in the State is presented, showing the number of manufacturing firms on a county basis. Three maps are used to depict the overall manufacturing scene. Map 1 shows the location of all manufacturing firms with four or more employees. To emphasize the heavy dependence upon sawmills and logging operations in the State, Map 2 shows the pattern of industrial activity exclusive of sawmills and logging operations. Activity in Fulton-DeKalb area is compared with the rest of the State on Map 3.

Section II, composed of 40 maps, shows the location of manufacturing operations by major industry groups and the most important sub-groups within each major classification. The number of plants and total employment in each of Georgia's 159 counties are indicated for each of the selected major or sub-groups. A brief analysis, including a listing of major firms, accompanies each map.

For the convenience of those who will use the Atlas as a reference source, two indices are provided at the end of the volume. The first identifies by county location each city referred to in the Atlas. The second gives map and text page references for each product and product group manufactured in Georgia.

Section I

MANUFACTURING IN GEORGIA:
AN OVERVIEW



MANUFACTURING IN GEORGIA: AN OVERVIEW

National and Regional Comparisons

While Georgia ranked fifteenth among the top industrial states in manufacturing employment in 1958, it stood nineteenth in values produced from manufacturing activities (Table 1). This reflects the fact that manufacturing in Georgia is largely concentrated in low-value, low-wage, high-employee categories.

Further evidence of this situation is found in regional comparisons, where Georgia ranked second among six southeastern states in manufacturing employment and third in value added, but fourth in value added per employee (Table 2). Among neighboring states, Georgia also ranked fourth in the ratio of manufacturing employment to total non-agricultural employment and next to the bottom in the percentage of total income contributed by manufacturing.

Additional details on Georgia's position among the nation's leading manufacturing centers are revealed in Tables 3, 4 and 5. Although nearly one-third of Georgia's total non-farm employment was concentrated in manufacturing activities (slightly higher than the national average), income from manufacturing amounted to only one-fifth of the State's total personal income. Nationally, manufacturing income was almost one-fourth of the total. At least 20 states had a greater percentage income from manufacturing in 1960 than did Georgia (Table 4).

When the value added per employee is considered, Georgia shows up even less favorably, ranking eighth from the bottom among 48 states. Only North Carolina, Arkansas, Maine, Rhode Island, New Hampshire, South Carolina and Mississippi ranked below Georgia. There was a deficit of over \$2,000 between the nation's average value added per employee (\$8,806) and Georgia's average (\$6,726).

In terms of specific industry categories, Georgia ranked high nationally as measured by employment in the textile, apparel and lumber industries (Table 6). These three groups, with food products, accounted for almost two-thirds of the State's manufacturing employment. Georgia was the third ranking state in textiles, accounting for 10% of the national employment, and fifth ranking in lumber, having 4.5% of the national total.

Table 1
MANUFACTURING EMPLOYMENT AND VALUE ADDED
(1958)

	Manufacturing Employees	Rank	Value Added (\$1,000)	Rank
New York	1,932,065	1	15,983,483	1
Pennsylvania	1,421,749	2	11,485,651	4
California	1,215,084	3	12,025,396	2
Ohio	1,192,644	4	11,426,396	5
Illinois	1,188,895	5	11,577,853	3
Michigan	882,641	6	8,313,659	6
New Jersey	797,524	7	7,560,443	7
Massachusetts	678,910	8	5,099,217	9
Indiana	552,287	9	5,461,542	8
Texas	480,142	10	5,059,428	10
North Carolina	463,681	11	3,107,880	14
Wisconsin	439,142	12	3,963,580	11
Connecticut	394,646	13	3,185,015	13
Missouri	380,749	14	3,201,407	12
GEORGIA	315,603	15	2,122,683	19
Tennessee	280,330	16	2,196,180	16
Maryland	259,205	17	2,361,177	15
Virginia	257,800	18	2,135,042	18
Washington	216,020	22	2,146,681	17

Source: Bureau of the Census, 1958 Census of Manufactures

Table 2
MANUFACTURING IN SIX SOUTHEASTERN STATES

	Employment		Value Added (\$1,000)		Value Added Per Employee Dollars		Ratio of Total Manufacturing Employment to Total Non-Farm Employment		Ratio of Manufacturing Income to Total Personal Income	
		Rank		Rank		Rank	Per Cent	Rank	Per Cent	Rank
GEORGIA	315,603	2	2,122,683	3	6,726	4	32.0	4	21.6	5
Alabama	229,998	4	1,755,724	4	7,634	3	31.8	5	22.9	4
Florida	173,539	6	1,456,945	5	8,395	1	14.7	6	9.2	6
North Carolina	463,681	1	3,107,880	1	6,703	5	43.1	1	26.7	2
South Carolina	224,901	5	1,348,523	6	5,996	6	42.6	2	27.4	1
Tennessee	280,330	3	2,196,180	2	7,834	2	33.4	3	24.7	3

Sources: Employment and value added data -- Bureau of the Census, 1958 Census of Manufactures

Employment ratio data -- Department of Labor, Bureau of Labor Statistics, Employment and Earnings, 1959

Income ratio data -- U. S. Department of Commerce, Office of Business Economics, Survey of Current Business, August, 1960

Table 3
MANUFACTURING EMPLOYMENT AS A PER CENT
OF TOTAL NON-FARM EMPLOYMENT
(1958)

	<u>Per Cent</u>	<u>Rank</u>
U. S.	31.9	
Connecticut	45.3	1
New Hampshire	44.8	2
North Carolina	43.1	3
New Jersey	42.8	4
Rhode Island	42.7	5
South Carolina	42.6	6
Indiana	41.7	7
Michigan	41.6	8
Ohio	40.6	9
Delaware	39.9	10
Pennsylvania	39.4	11
Wisconsin	39.2	12
Massachusetts	38.2	13
Maine	37.1	14
Illinois	35.9	15
Tennessee	33.4	16
Vermont	32.4	17
New York	32.1	18
GEORGIA	32.0	19

Source: Statistical Abstract of the United States, 1959

Table 4
MANUFACTURING INCOME AS A PER CENT
OF TOTAL PERSONAL INCOME
(1960)

	Per Cent	Rank
U. S.	24.1	-
Michigan	37.5	1
Indiana	36.0	2
Ohio	35.4	3
Connecticut	35.2	4
New Jersey	32.4	5
Wisconsin	31.6	6
Pennsylvania	31.4	7
Delaware*	30.9	8
New Hampshire*	30.1	9
Rhode Island*	29.0	10
Illinois	28.5	11.5
Massachusetts	28.5	11.5
South Carolina*	27.4	13
North Carolina	26.7	14
Tennessee**	24.7	15
Maine*	24.6	16
Alabama*	22.9	17
Vermont*	22.8	18
New York	22.5	19
Missouri	22.3	20
GEORGIA	21.6	21

* States whose incomes (total and manufacturing) are less than Georgia's.

** Tennessee has a smaller total income than Georgia but its manufacturing income is slightly greater than Georgia's.

Source: Survey of Current Business, U. S. Department of Commerce, August, 1960.

Table 5
VALUE ADDED BY MANUFACTURING PER EMPLOYEE
(1958)

U. S.	\$ 8,806		
Nevada	13,867	Oregon	\$ 9,083
Utah	11,429	Wisconsin	9,026
Kentucky	11,000	Idaho	8,936
Texas	10,537	South Dakota	8,743
Louisiana	10,491	Missouri	8,408
New Mexico	10,313	Florida	8,395
West Virginia	10,226	Virginia	8,282
Iowa	10,102	New York	8,273
Colorado	10,048	Pennsylvania	8,079
Washington	9,937	Connecticut	8,071
California	9,897	Tennessee	7,834
Indiana	9,889	Oklahoma	7,730
Kansas	9,849	Alabama	7,634
Illinois	9,738	Massachusetts	7,511
Wyoming	9,732	Vermont	7,233
North Dakota	9,649	Delaware	7,132
Ohio	9,581	GEORGIA	6,726
New Jersey	9,480	North Carolina	6,703
Michigan	9,419	Arkansas	6,615
Minnesota	9,284	Maine	6,603
Montana	9,214	Rhode Island	6,581
Arizona	9,186	New Hampshire	6,192
Nebraska	9,157	South Carolina	5,996
Maryland	9,109	Mississippi	5,902

Source: Bureau of the Census, 1958 Census of Manufactures

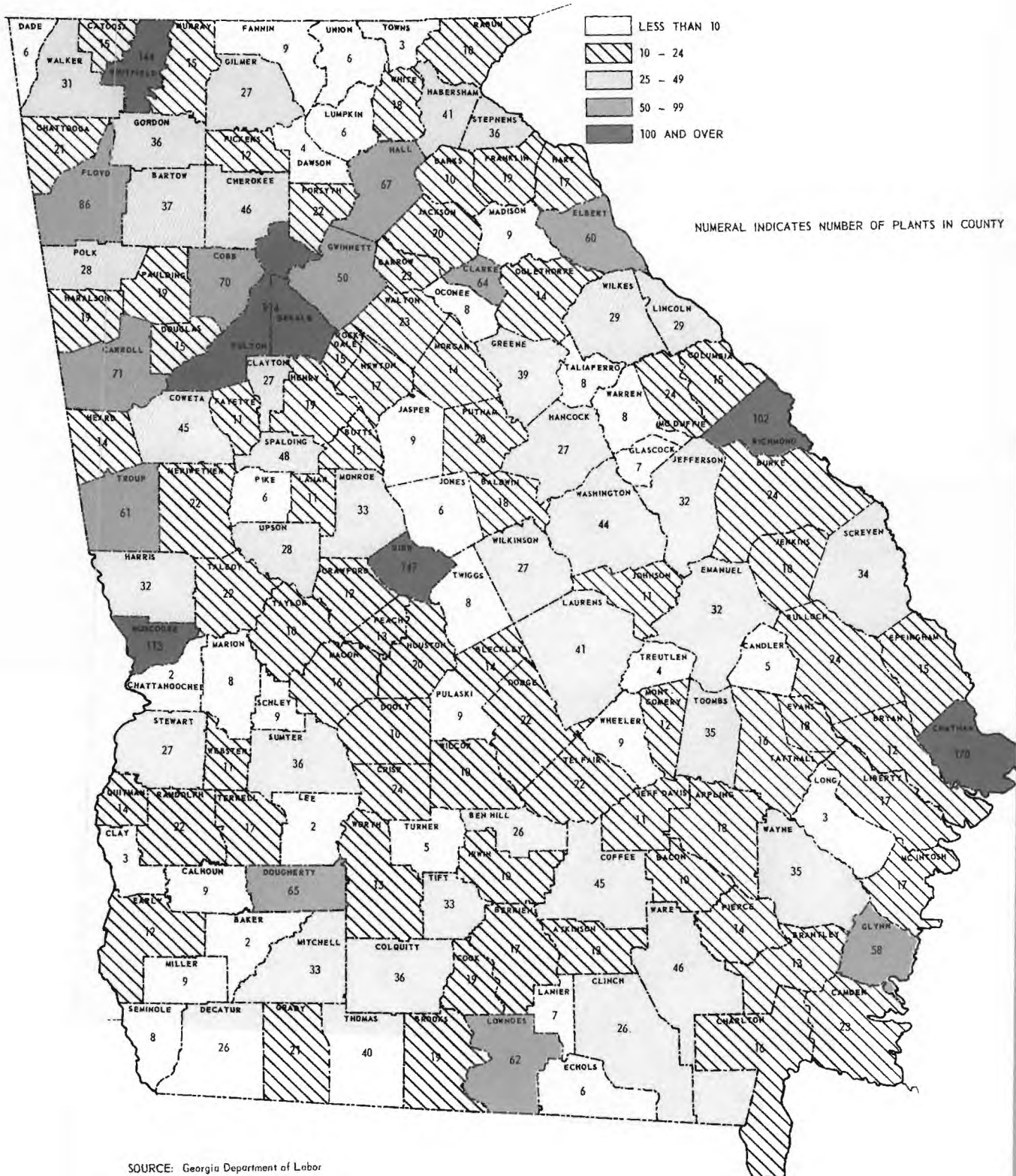
Table 6
RANK BY EMPLOYMENT OF GEORGIA INDUSTRY GROUPS
(1958)

Industry Type	Rank in Georgia	Georgia's National Rank	Ratio of Georgia Employment to U. S.	Number of States ^{1/} Represented
Textile Mill Products	1	3	10.30	33
Food and Kindred Products	2	15	2.46	49
Apparel and Related Products	3	7	3.46	41
Lumber and Wood Products	4	5	4.51	47
Transportation Equipment	5	17	1.64	35
Paper and Allied Products	6	13	3.03	37
Chemicals and Allied Products	7	21	1.45	43
Stone, Clay and Glass Products	8	15	1.77	48
Printing, Publishing and Allied Industries	9	20	1.13	48
Machinery, Except Electrical	10	23	0.55	44
Fabricated Metal Products	11	22	0.69	44
Furniture and Fixtures	12	16	1.95	40
Electrical Machinery	13	24	0.35	34
Leather and Leather Products	14	14	1.02	29
Primary Metal Industries	15	28	0.27	32
Rubber and Plastics Products	16	18	0.34	18
Petroleum and Coal Products	17	26	0.36	32

^{1/} Survey included 48 states and District of Columbia; Alaska and Hawaii not included. It should be noted that the above major industry groups are not represented in all areas. For example, Rubber and Plastics Products are manufactured in only 18 of the 49 areas surveyed.

Source: Bureau of the Census, 1958 Census of Manufactures

MAP 1
MANUFACTURING FIRMS WITH FOUR OR MORE EMPLOYEES
(Second Quarter, 1960)



SOURCE: Georgia Department of Labor

Manufacturing Within Georgia

The accompanying maps are based on data compiled by the Georgia Department of Labor for the second quarter of 1960. They show the total number of manufacturing firms by county without regard for employment or industry type, except as comparisons are made with sawmills and logging operations excluded. Manufacturing employment was computed separately and is discussed in the section following the analysis of the first two maps. The third map compares the manufacturing concentration in the Fulton-DeKalb area with the remainder of the State.

Manufacturing Firms by County. Thirty-two counties had fewer than 10 industrial firms each in 1960 (Map 1). Sawmills and logging camps accounted for 85% of the industries in almost half (15) of the counties in this group. Three counties -- Baker, Echols and Lanier -- had no other type of industry. Moreover, sawmilling and logging accounted for about 65% of the total number of plants in this group.

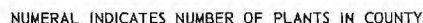
A total of 72 counties had a minimum of 10 plants but not more than 24. Again, sawmills and logging camps accounted for most of the industries by type (52.7%). Quitman, Effingham and Charlton, with 14, 15 and 16 companies respectively, had no other type of industry. Rockdale, with 15 firms, was the only county in the State without a logging camp or sawmill.

Thirty-seven counties had from 25 to 49 establishments. There was an average of 16 logging camps and sawmills per county in this group, representing 46% of all operations by type. Twenty-eight of the 29 industries in Lincoln County and 24 of the 26 in Clinch County were engaged in either sawmilling or logging operations, whereas only two of the 27 in Clayton were so classified.

Of the more industrialized counties, 11 had from 50 to 99 industries each, while seven had more than 100 each. The only area in the State where the number exceeded 200 was the Fulton-DeKalb area, where 914 firms (18.5% of the State's total) were located. Of the smaller counties, 86 had fewer than 20 companies each. The combined total in these counties was 975, only 61 more than that in the Fulton-DeKalb area.

The relative importance of sawmilling and logging decreases in the more industrialized counties. For example, sawmilling and logging accounted for only 16.9% of the industries in the 50 to 99 group (11 counties) and 10.5% in the over 100 group (seven counties). For the Fulton-DeKalb area only 3.3%

MAP 2



-12-

of the firms were so classified. In the State as a whole, sawmilling and logging accounted for 31.4% of all establishments.

The industrial picture of the State changes noticeably with the removal of sawmilling and logging operations (Map 2). Some 86 counties had fewer than 10 plants each. Six of these were without any industry. Forty-three counties had from 10 to 24 establishments, while 16 had between 25 and 49. Only eight were in the 50 to 99 class; six had more than 100 establishments.

Excluding sawmills and logging camps, the total for the Fulton-DeKalb area exceeded that of 124 other counties. These 124 counties, each having fewer than 22 manufacturers, had a total of 835 establishments, compared to 884 for the Fulton-DeKalb area.

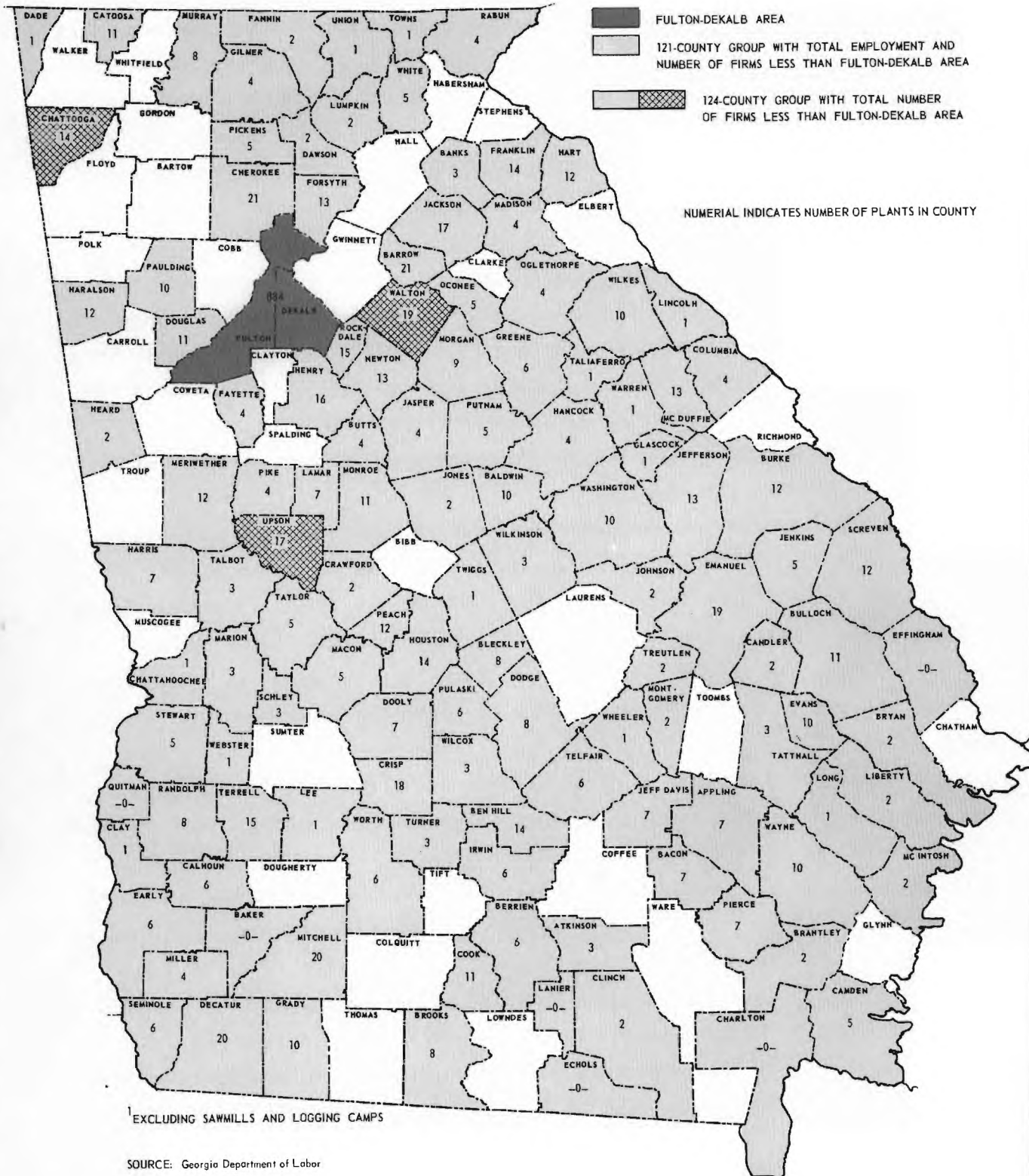
Manufacturing Employment by County. Employment used as a measure of the industrial base gives a quite different picture than just consideration of the number of plants alone. Sawmills and logging camps accounted for nearly one-third of the State's total industrial establishments by type, as noted above. Although there were over 700 logging camps and about 800 sawmills in the State, average employment in a logging camp was less than 10 persons, with only about 20 persons per sawmill.

Total employment in the 86 counties found to have fewer than 10 establishments when sawmills and logging operations were excluded was 6,086, with sawmills and logging operations employing 1,533 of the total. Thus measured on an employment basis, logging and sawmilling accounted for only slightly over one-quarter (25.2%) of the industrial base for this group of counties, although the two types of operations made up almost two-thirds of the total number of firms.

Counties with a minimum of 10 industrial establishments but not more than 24 had a total employment of 60,209. Sawmills and logging camps employed 7,421 workers, or 12.3% of the total for this group. Counties having from 25 to 49 companies had a total employment of 72,946, accounting for 10.2% of all employment. This group had only 7,464 employed in sawmilling and logging operations. Total employment in the 11 counties (each with 50 to 99 firms) was 70,127. Employment in the seven counties with more than 100 establishments was 130,215. Employment in sawmilling and logging represented 2.1% of total employment in the 11-county group and only 1.4% in the seven-county group. The Fulton-DeKalb area had 19.4% of all employment and 18.5% of all

MAP 3

CONCENTRATION OF MANUFACTURING FIRMS IN FULTON-DEKALB AREA¹



manufacturing firms in the State, accounting for almost one-fifth of Georgia's manufacturing activity.

Manufacturing Concentration in Fulton-DeKalb Area. On an establishment basis (exclusive of sawmills and logging camps), the Fulton-DeKalb area had more firms (884) than were found in 124 other counties (Map 3). The 838 firms in this group of counties employed a total of 76,086 workers, compared to the 66,410 for Fulton and DeKalb. Upson (4,751), Chattooga (4,169) and Walton (3,314) -- the three largest counties in the group -- accounted for 12,234 employees. If these three counties were eliminated from the list, total employment as well as number of firms in the Fulton-DeKalb area would then have exceeded that of 121 of Georgia's counties.

Even with the sawmills and logging operations included (Map 1), the manufacturing concentration in the Atlanta area was striking. The 86 counties having fewer than 20 firms each accounted for 975 plants compared to the 914 found in Fulton and DeKalb counties. But total employment in the 86 counties amounted to only 40,040 as against 67,202 in the Fulton-DeKalb area. Moreover, total employment in the Fulton-DeKalb area exceeded the combined employment of the 104 counties with one to 24 firms. These 104 counties had 1,374 firms, but only 66,291 employees.

Section II

MANUFACTURING IN GEORGIA:
AN ATLAS BY INDUSTRY GROUP

MANUFACTURING IN GEORGIA:
AN ATLAS BY INDUSTRY GROUP

The series of maps which follow are based on data taken from the Industrial Development Branch's Georgia Manufacturing Directory, 1960-61 files and from information made available under special arrangement with the Georgia Department of Labor.

The directory files list industrial establishments by location (city), type of industry and number of employees during the period October, 1959 to June, 1961. These data were compared with second quarter 1960 data supplied by the Georgia Labor Department and modified where necessary. For example, since IDB data on sawmills and logging operations in the State were incomplete, the Labor Department data were used as the basis for maps showing these two operations. Where IDB's four-digit industrial classification for a given operation showed marked variance from that of the Labor Department, each individual company was contacted for verification of its employment.

Variations were also noted in total number of establishments. The Labor Department list included only those establishments covered by the Georgia Employment Security Law at the time the list was compiled. Generally, only companies with four or more employees were included. IDB's list included all firms regardless of employment size.

Another problem was in industry classification. A few large companies have district divisions which manufacture more than one product line. These were shown separately whenever possible. For example, Kraft Foods Division of National Dairy Products makes processed cheese, margarine and salad products in its Decatur plant. Therefore Kraft Foods was given three industry classifications and employment was adjusted accordingly, whereas the Labor Department data indicated only the most significant industry classification and applied total employment to that classification. In several instances this analysis lists as manufacturing operations activities which the Labor Department classes as service or trade. Again, this difference occurred because the company actually engages in multiple activities -- manufacturing, service and/or trade. This analysis attempts to break out the manufacturing activity as a separate operation.

It should be recognized that employment data are for the period October, 1959 through June, 1961. Since some establishments have seasonal changes in

employment, the time the employment data were secured may have coincided with either the high or low point. Again, some plants may now have more (or fewer) employees than when the original data were compiled, while some new industries may have been organized and others dissolved. However, a final check was made in June, 1961 to revise all data and make whatever corrections seemed necessary. The vast bulk of the data, therefore, reflect the current status of manufacturing in Georgia.

Detailed industries have been grouped in what is hoped to be a useful and practical way. This accounts for the different number of maps used in presenting several of the major industry groups. In a few instances it was desirable to show the total industrial complex on one map, followed by sub-maps of the most important segments of that industry to facilitate the comparison of these segments to the total. For some major groups only one map was prepared because major segments could be explained without the use of sub-maps. In three groups -- Fabricated Metal Products, Lumber and Wood Products, and Printing, Publishing and Allied Industries -- it was found that the industries could best be presented on sub-maps without making a comparison to the total.

Three major industry groups -- Ordnance and Accessories, Tobacco Manufactures, and Miscellaneous Manufacturing Industries -- are not presented in map form. Because of the limited number of Georgia firms engaged in ordnance and tobacco manufacturing, plants in these categories are excluded from the atlas section. Only two ordnance plants and one tobacco manufacturing plant were in operation in 1960, although the latter was of substantial size (more than 500 employees). A map of the miscellaneous manufacturing industries in the State would have little significance because of the heterogeneous nature of the firms in this category. Since this classification represented more than 4,700 employees, however, certain facts about the firms in this group should be noted.

Miscellaneous manufacturing industries include establishments primarily engaged in manufacturing products not classified in any other manufacturing group: jewelry, silverware and plated ware; musical instruments; toys, sporting and athletic goods; pens, pencils and other office and artists' materials; buttons, costume novelties, and miscellaneous notions; brooms and brushes; morticians' goods; dressed and dyed furs; signs and advertising displays; umbrellas, parasols and canes; and miscellaneous fabricated products

such as beauty shop and barber shop equipment, hair work, tobacco pipes and cigarette holders, and coin operated amusement machines.

The miscellaneous manufacturing group was concentrated in the Atlanta Metropolitan Area (five counties) where nearly 50% of all firms employed 67% of the workers. Fulton County alone accounted for more than 3,000 workers in 51 plants. Besides Fulton, only five other counties -- Chatham, Cobb, DeKalb, Floyd and Richmond -- had more than five plants. Total employment in Chatham, Cobb, Floyd and Richmond was less than 50; in DeKalb total employment was only slightly over 100. The following table shows a breakdown of number of firms and employment by type of product manufactured.

Table 7
MISCELLANEOUS MANUFACTURING INDUSTRIES

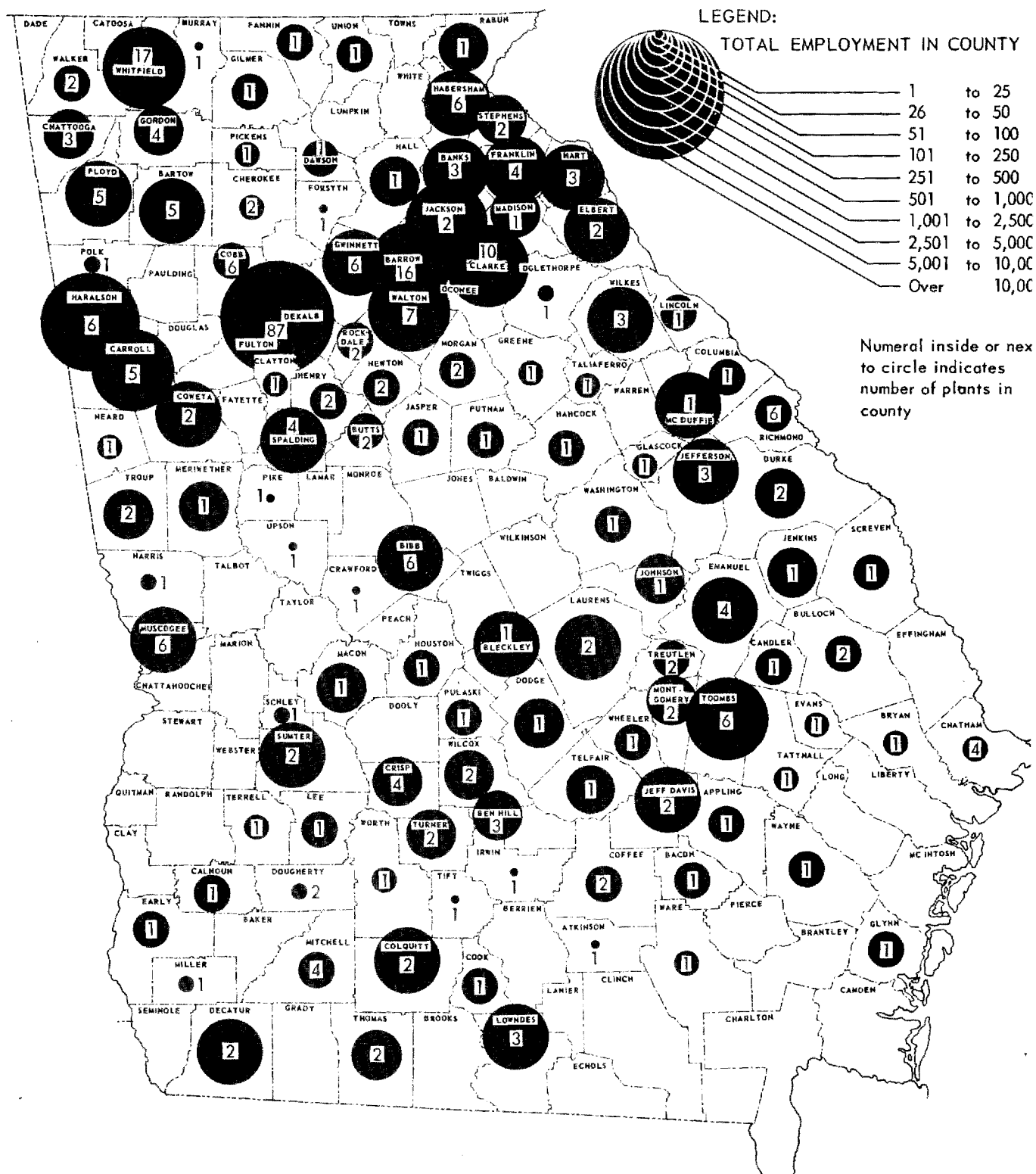
Type of Product	Number of Firms	Number of Employees
Toys, amusement, sporting and athletic goods	18	755
Pens, pencils and other office and artists' materials	10	2,022
Costume jewelry and costume novelties	11	520
Brooms, brushes	14	195
Morticians' goods	19	851
Signs and advertising displays	53	325
All other miscellaneous manufacturing	10	46
	<hr/>	<hr/>
Total	135	4,714

Source: Georgia Manufacturing Directory, 1960-61, Industrial Development Branch, Engineering Experiment Station, Georgia Institute of Technology, Atlanta, July, 1961.

The largest firms in the miscellaneous manufacturing group, ranked by size, are Scripto, Inc., Atlanta (pens, pencils and cigarette lighters); Atlanta Metallic Casket Company, Villa Rica (caskets); The Rushton Company, Atlanta (soft stuffed toys); Scovill Manufacturing Company, Clarkesville (zippers); M. A. Ferst, Ltd., Atlanta (graphite and colored leads and erasers); Talon, Inc., Cleveland (zippers); and Toccoa Casket Company, Toccoa (caskets).

MAP 4

APPAREL AND RELATED PRODUCTS



APPAREL AND RELATED PRODUCTS

In 1960, the manufacture of apparel and related products was Georgia's second ranking industry, with 359 plants employing over 50,000 workers. Two years earlier (1958), Georgia ranked seventh among the states in the apparel industry, with 3.5% of the nation's employment.^{1/}

This industry is well diversified in the State, with operations in 116 counties. The greatest concentration of plants and workers, however, is in north Georgia. The Fulton-DeKalb area leads the State with 87 plants and almost 8,000 workers. Haralson is second with 2,640 persons employed in six plants, followed by Whitfield with 17 plants and 2,300 workers. Six other counties -- Barrow, Carroll, Clarke, Jackson, Toombs (the only south Georgia county) and Walton -- each has over 1,000 persons employed in apparel manufacture. These 10 counties account for 42% of all employment in the State's apparel industry.

The manufacture of men's and boys' clothing accounts for 40% of the State's plants and 61% of its employment. Women's and children's clothing accounts for one-fourth of the plants and employment. Miscellaneous apparel and related products account for slightly more than one-third of the plants but only one-seventh of the workers.

Detailed analyses of men's and boys' clothing and women's and children's clothing are shown on Maps 4-A and 4-B. The miscellaneous group, however, is not shown separately since its total employment is relatively small. Nevertheless, the following analysis of the miscellaneous segment is presented, since 122 plants employing 6,980 workers operate in 40 counties and produce a wide variety of products. This segment is divided into three groups -- house furnishings, miscellaneous apparel and other related products.

House furnishings include such items as curtains, draperies, bedspreads, mops and pillows. This group constitutes the largest part of the miscellaneous segment, with 43 operations located in 20 counties and employing nearly 3,200 workers. Whitfield is the State's leading county in the production of house furnishings, having 12 operations employing over 1,750 workers. Fulton County is second with 10 plants employing nearly 400. Bartow, Burke, Butts, Chatham, Cobb, Coweta, Crisp, Dougherty, Floyd, Gilmer, Gordon, Gwinnett,

^{1/} See Table 6, page 9.

Habersham, Houston, Richmond, Rockdale, Upson and Ware are the other counties having plants producing house furnishings.

Miscellaneous apparel includes such items as millinery, hats and caps, fur goods, gloves, robes and dressing gowns, waterproof outer garments, belts, suspenders and garters, handkerchiefs, pleating and decorative stitching and apparel findings. This group accounts for one-fourth of the plants and nearly one-third of the employment in this segment. Over half of the plants in this group are concentrated in the Atlanta area, but these are relatively small operations, only three employing 50 or more workers. The two belt manufacturers and the lone fur goods operation are located in Atlanta, as are all but one of the millinery, hats and caps manufacturers and four of the eight manufacturers of garters, suspenders and handkerchiefs. The two decorative stitching operations and two of the three apparel findings operations are also in the Atlanta area.

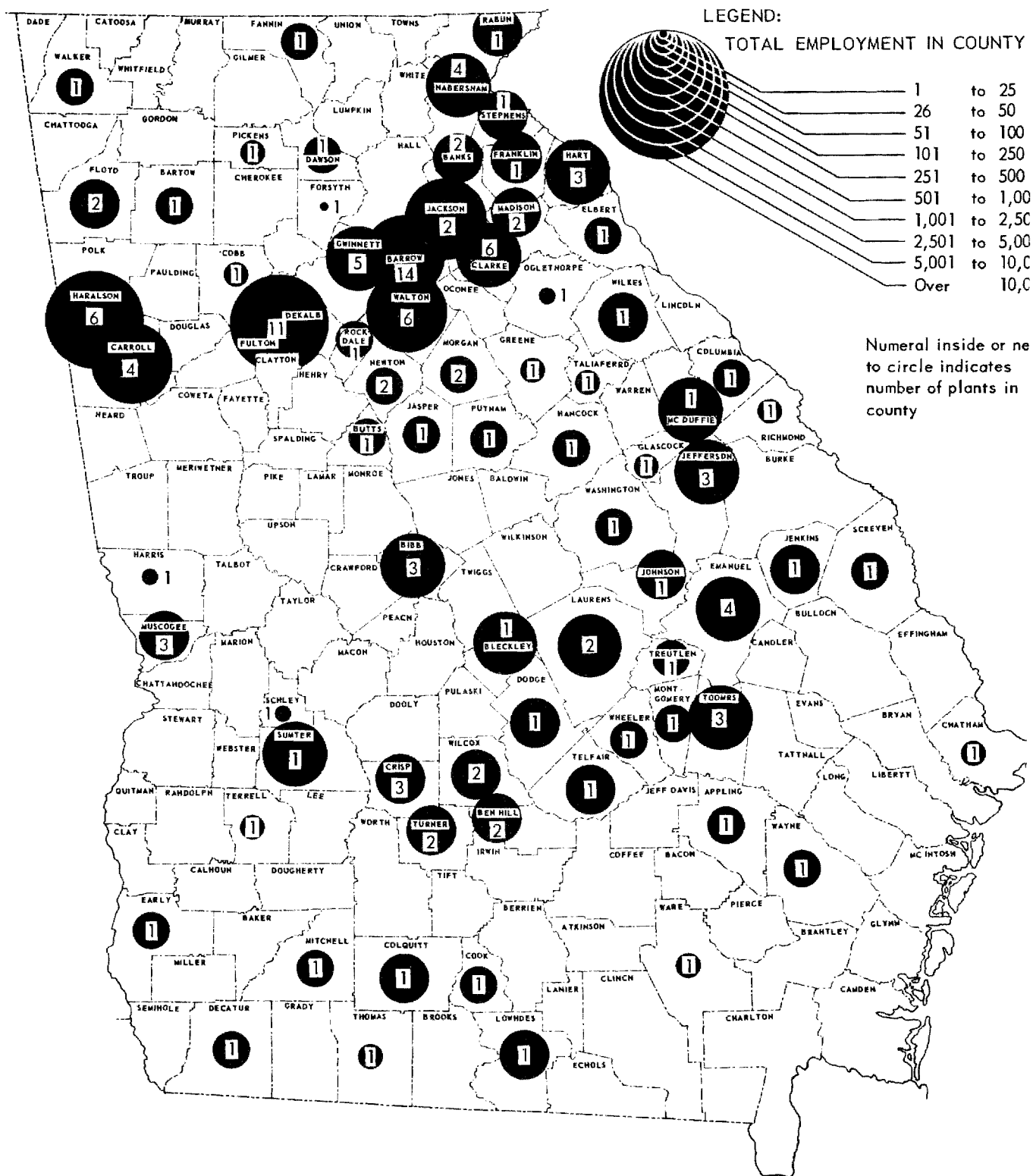
In addition to the Atlanta area, hats and caps are produced in Carroll County and apparel findings in Barrow County. The remaining garter, suspender and handkerchief operations are found in Gordon, Henry, Richmond and Spalding counties. Six plants located in Burke, Gordon, Spalding, Sumter, Whitfield and Wilkes counties manufacture robes and dressing gowns. The plants in Burke, Whitfield and Wilkes counties are large operations, each employing more than 250 workers. Gloves are manufactured in Chattooga, Crawford and Floyd counties, with the Floyd and Chattooga operations each employing more than 200.

The third group, other related products, includes textile bags, canvas products and fabricated textile products. In general, the plants in this group are small, which explains why the 47 plants employ only slightly more than one-fifth of the workers in the miscellaneous segment. Only six of these employ 100 or more workers and none exceeds 350, while 33 employ fewer than 26 each.

Textile bags are produced in seven plants located in Atkinson, Cherokee, Fulton, Lowndes, Muscogee and Richmond counties. Thirteen plants located in Bibb, Chatham, Fulton, Lowndes, Murray, Richmond, Treutlen and Whitfield counties produce canvas products. Fabricated textile products are manufactured in 27 plants located in Barrow, Chattooga, Cherokee, Clarke, Cobb, Floyd, Fulton, Habersham, Henry, Jeff Davis, Muscogee, Tift, Toombs and Whitfield counties. Eleven of these are in Fulton County.

Among the largest manufacturers included in the miscellaneous group of apparel and related products, ranked by size, are Bellcraft Chenilles, Inc., Dalton (chenille bedspreads and throw rugs); Art-Rich Manufacturing Company, Dalton (tufted and terry cloth robes and jackets); Waynesboro Garment Company, Inc., Waynesboro (bathrobes, drapes and sportswear); Ero Manufacturing Company, Hazlehurst (auto seat covers, sporting goods); Best Manufacturing Company, Menlo (work gloves); Almar Manufacturing Company, Inc., Washington (plastic rainwear); and Carolyn Chenilles, Inc., Dalton (chenille bedspreads).

MAP 4-A
MEN'S AND BOYS' CLOTHING



APPAREL AND RELATED PRODUCTS

Men's and Boys' Clothing

The production of men's and boys' clothing provides jobs for more than 31,000 persons in 144 plants located in 74 of Georgia's counties.

Based on employment, the State's leading counties are, respectively, Fulton, Haralson, Barrow, Carroll, Walton and Jackson. Together these six counties (43 plants total) account for nearly three-eighths of the workers.

Excepting Atlanta, which has nine plants employing 3,032, these operations are located in small towns and in many instances constitute the town's major source of employment. This situation also exists elsewhere in the State, for only 37 plants (total employment 8,382) are located in cities of more than 10,000 population. Moreover, Georgia's other metropolitan areas have relatively limited activity in this line, a total of eight plants with a combined employment of 1,100 being found in Augusta, Columbus, Macon and Savannah.

Again using employment as a measure, the most important products manufactured in the men's and boys' line are shirts, work clothing, and separate trousers. While two of the State's largest plants manufacture suits and coats, these items rank fourth overall, followed by sportswear, underwear, and neckwear. The 38 plants making shirts operate in 30 counties and have a combined employment of over 10,200. While the greatest concentration of workers is in Fulton County, where two plants employ more than 2,000 workers, most of the shirt operations are located south of the fall line in the east and south central area of the State. Four counties -- Bleckley, Emanuel, Sumter and Toombs -- have more than 500 workers each.

The manufacture of work clothing is found in 29 counties, with major concentration in northeast Georgia. Barrow County leads the State with five plants employing more than 1,200, followed by Walton, Habersham, Clarke and Jackson, each of which has more than 500 employees in this category. Work clothes operations number 47 in the State and employ slightly more than 9,000 workers.

The 29 plants that manufacture separate trousers are more widely scattered than either the shirt or work clothes operations. These plants are located in 22 counties and have a total work force of about 5,300. Haralson

County leads the State in total employed, followed by McDuffie. Both have more than 500 workers. Barrow is third with nearly 500 workers.

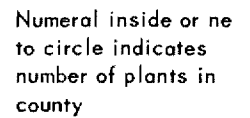
Men's suits and coats are produced in 11 counties, where 14 plants employ nearly 4,200. The center of these operations is located in two adjacent counties, Carroll and Haralson, where four plants (two in each county) employ over 2,600 or 63% of the work force engaged in the manufacture of men's suits and coats.

Men's and boys' sportswear operations are located in 12 counties, with 13 plants employing over 1,800 workers. Sportswear operations are centered in the Gwinnett, Barrow, Jackson, Clarke and Madison area, where six plants account for 53% of the workers in this category.

The largest operations in the manufacture of men's and boys' clothing, ranked by size, are Cluett, Peabody & Company, Atlanta (dress shirts); Sewell Manufacturing Company, Bremen (suits and coats); Warren Sewell Clothing Company, Bowdon (suits and coats); Manhattan Shirt Company, Americus (dress shirts); The Hubbard Pants Company, Bremen (separate trousers); Blue Bell, Inc., Commerce (work clothes); Thomson Company, Thomson (separate trousers); L & H Shirt Factory, Cochran (men's shirts); and Carwood Manufacturing Company, Winder (work clothes).



WOMEN'S AND CHILDREN'S CLOTHING



APPAREL AND RELATED PRODUCTS

Women's and Children's Clothing

The second most important segment of Georgia's apparel industry is the manufacture of women's and children's clothing. Some 93 plants employ about 12,600 workers.

These operations are located in 49 counties, clustered in four distinct regional centers. The largest is centered around Fulton County and includes operations in Bartow, Clayton, Cobb, Coweta, DeKalb, Heard, Meriwether, Pike, Spalding and Troup. This area accounts for 45 plants and over 5,900 employees, or nearly one-half of all employment and operations.

The next largest area has Clarke County as its center and includes Banks, Elbert, Franklin, Hall, Lincoln, Madison, Stephens, Walton and Wilkes. Here are found 15 plants employing slightly more than 2,300 workers. Toombs County is the center of the southeast area (third largest), which includes Bacon, Bryan, Bulloch, Candler, Coffee, Evans, Jeff Davis, Montgomery and Tattnall counties. In this area some 1,950 workers are employed in 12 plants. The southwest area includes nine counties -- Calhoun, Colquitt, Decatur, Dougherty, Lee, Miller, Mitchell, Thomas and Worth -- where 11 plants employ over 1,400 workers.

On an individual county basis only four in the State (Fulton, Coweta, Clarke and Troup) have a work force of over 500. Fulton, however, has more than 3,350 workers or over one-fourth of the total work force engaged in the manufacture of women's and children's clothing.

As in the case of men's and boys' clothing, the manufacture of women's and children's clothing tends to locate in small towns. Excepting Atlanta, which has a total of 33 plants, only 14 other plants (with a combined employment of 2,880) are located in cities of over 10,000 population. Albany, with one small operation, is the only other metropolitan area in Georgia that has a plant manufacturing women's and children's garments.

Nearly half of the employment in women's and children's clothing is engaged in the manufacture of underwear, nightwear and foundation garments. Twenty-eight plants located in 22 counties employ nearly 6,100 workers. The heaviest concentration of employment in this line is in the five-county area of Coweta, Fulton, Meriwether, Spalding and Troup, where 2,400 are employed

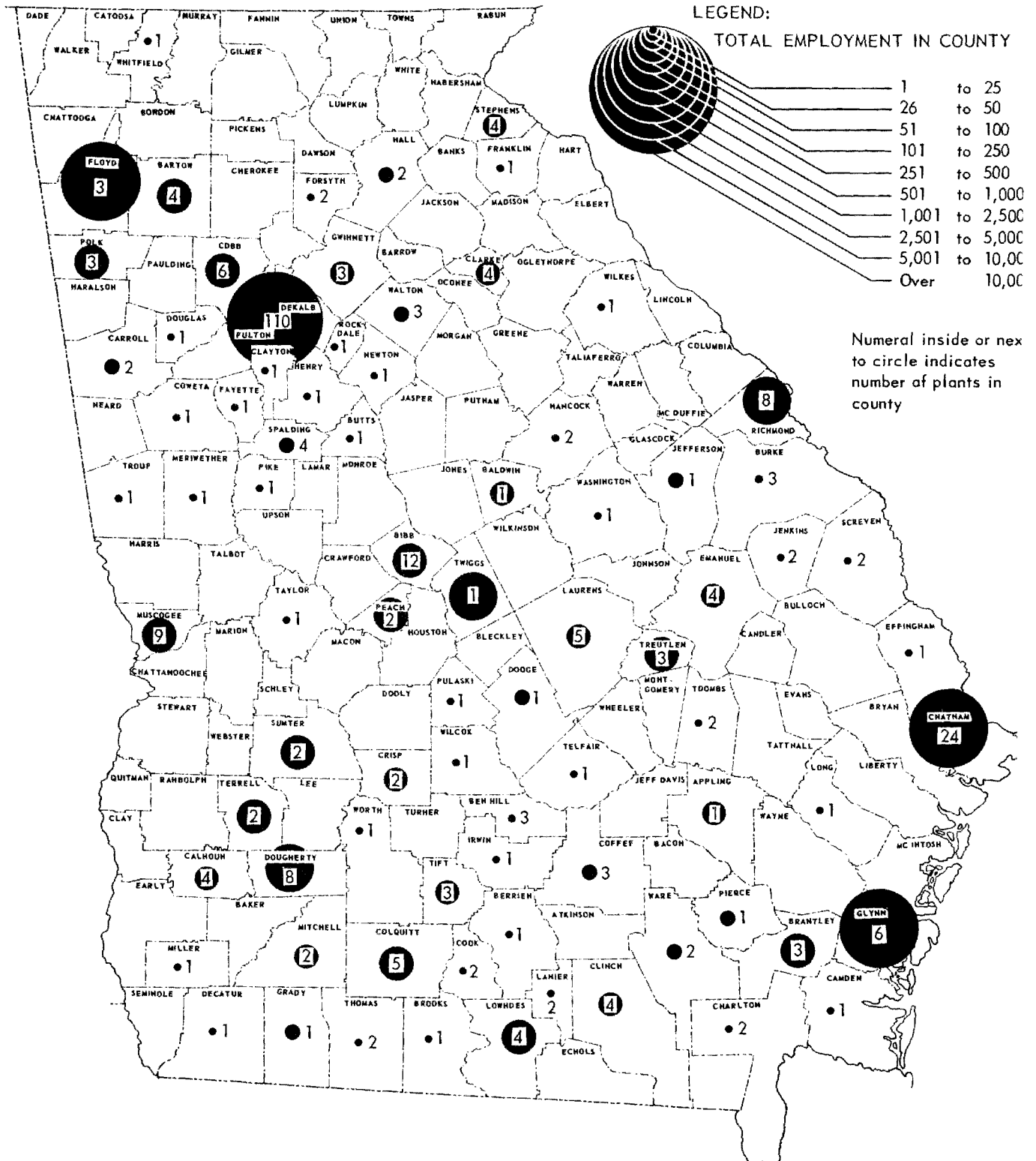
in nine plants. The remaining plants in this line are located in Bartow, Franklin, Hall and Polk counties in north Georgia, in Bibb and Macon counties in central Georgia, and in Ben Hill, Calhoun, Coffee, Colquitt, Evans, Irwin, Jeff Davis, Lee, Thomas, Toombs and Worth counties in south Georgia.

Coats, suits, skirts and other outerwear are produced in 38 plants located in Bacon, Bryan, Clarke, Cobb, Coffee, Dougherty, Franklin, Fulton, Glynn, Heard, Madison, Mitchell, Pike, Pulaski, Spalding, Troup, Walton and Whitfield counties. Together these operations employ 3,300 workers. Fulton is the leading county, with 16 plants employing over 1,200 workers. In general these operations employ fewer workers than those producing underwear and foundation garments and dresses, blouses and shirts.

Dresses, blouses and shirts are manufactured in 27 plants (total employment 3,200) located in four separate areas of the State. Twelve plants are located in Fulton and Clayton counties. The northwest counties of Banks, Elbert, Franklin, Lincoln, Stephens, Union and Wilkes have one operation each. In southeast Georgia, Candler, Montgomery and Tattnall each has one plant and Bulloch has two. In the southwest corner of Georgia, Decatur and Miller counties each has a single operation.

Georgia's largest manufacturers of women's and children's apparel, ranked by size, are Lovable Brassiere Company, Atlanta (foundation garments); International Latex Corporation, Newnan (foundation garments); International Latex Corporation, LaGrange (foundation garments); International Latex Corporation, Manchester (foundation garments); Hazlehurst Manufacturing Company, Hazlehurst (underwear and nightwear); Thomas Textile Company, Inc., Whitehall (infants' garments and diapers); Elberton Manufacturing Company, Elberton (blouses, waists and skirts); Griffin Garment Company, Griffin (foundation garments); Warren-Featherbone Company, Gainesville (underwear and nightwear); Glen Manufacturing Company, Bainbridge (dresses); Hazlehurst Manufacturing Company, Vidalia (underwear and nightwear); and Warner Brothers Company, Thomasville (foundation garments).

MAP 5 CHEMICALS AND ALLIED PRODUCTS



CHEMICALS AND ALLIED PRODUCTS

The chemical industry ranks seventh in total persons employed among the major industry groups in Georgia. With 12,500 employed in 326 plants, this major industry group ranks fifth in geographical coverage, however. One or more plants are found in 82 counties.

The accompanying map presents the total picture of Georgia's chemical industry. A second map, "Fertilizer," shows the location of the 95 fertilizer plants in the State. Fertilizer operations were singled out because the number of operations was considered significant when compared with other types of plants in the chemical complex.

The Fulton-DeKalb area is the State's leading chemical center; more than 3,600 are employed there. Floyd, Chatham and Glynn counties, respectively, are the next largest employment centers, with total employment in each county exceeding 1,300. Combined, the five counties account for 64% of all employment in the chemical industry.

In addition to having nearly one-third of all chemical employment, the Fulton-DeKalb area is the most diversified area in the State. Of the 24 different types of chemical operations found in Georgia, 17 are represented in the area. Heaviest concentration of employment, however, is in the manufacture of soaps, detergents and cleaners, and in paints and varnishes. These two categories account for 2,100 of the 3,600 employed. Chatham County's greatest concentration of workers is in the manufacture of fertilizers and industrial inorganic chemicals, where almost 80% of the work force is engaged. Almost all of Floyd County's employment is engaged in the manufacture of cellulosic man-made fibers. Glynn County also derives most of its employment from a single product, naval stores.

Other than agricultural chemicals, the manufacture of wood and gum chemicals is the most significant product line in the State's chemical complex. Some 39 plants employ a total of 1,900 workers. Except for a small charcoal plant in Floyd County, all of these plants are located in 21 counties in the southeastern part of the State. Glynn County, the industry's center, has the State's largest naval stores operation, which is also the second largest of all chemical plants in Georgia. Chatham, Brantley and Treutlen, each with a total work force exceeding 100, are the next leading employment

centers. Chatham and Clinch, however, have the most plants -- six and four, respectively.

Industrial chemicals and soaps, detergents and cleaning compounds are the next most important product lines, each accounting for about 1,450 workers. Industrial chemicals are produced in Bartow, Bibb, Chatham, Clayton, Cobb, Colquitt, DeKalb, Dougherty, Floyd, Fulton, Glynn, Mitchell, Richmond, Spalding, Ware and Whitfield counties. Nearly 80% of the employment is concentrated in four counties, however -- Fulton, Chatham, Glynn and Richmond. Together these four counties have 17 of the 29 plants. Fulton County alone has 10 plants employing more than 450 workers.

Soaps, detergents and cleaning compounds are produced in Bibb, Burke, Chatham, Cobb, DeKalb, Fulton, Muscogee, Polk, Richmond, Stephens, Thomas and Troup counties. Only 14 of the 48 plants are found outside of the Fulton-DeKalb area. Together, they employ less than 10% of the workers engaged in the manufacture of soaps, detergents and cleaning compounds.

Georgia's three producers of plastics and synthetic man-made fibers command an eighth of the employment in chemicals. The largest of these and also the State's largest chemical plant (Celanese Fibers Company) is in Floyd County. The other two are plastics manufacturers located in Bartow and Cobb counties.

Paints, varnishes and allied products are produced in 32 plants, with one or more operations located in Bibb, Chatham, Cobb, DeKalb, Douglas, Fulton, Glynn, Gwinnett and Stephens counties. Of the nearly 1,200 employed in these plants, over 750 work in the 19 plants in the Fulton-DeKalb area. Glynn County is second in total number of workers with about 225 employed in three plants.

The remaining chemical products produced in Georgia include drugs, perfumes and cosmetics, wetting agents, penetrants, emulsifiers, glue and gelatin, printing ink, fatty acids and other industrial and household chemicals. A total of 69 plants is involved with a combined employment of nearly 1,700. Of the group, the manufacturers of drugs, printing ink and emulsifiers, penetrants and wetting agents account for 42 of the plants and 1,200 of the employees.

Seven of the drug firms are in Fulton County. The remaining 11 are in Baldwin, Bibb, Chatham, Coffee, Dougherty, Forsyth, Hall, Muscogee and Worth

counties. Of the 400 employed in drug manufacture, 48% work in Fulton, 23% work in Dougherty and 19% work in Baldwin.

More than 450 are engaged in the production of printing ink in Georgia. Fulton County has 10 of the 13 plants, but only 150 of the employees. Camden, Chatham and Twiggs are the host counties of the other plants. The Twiggs County plant is the State's largest printing ink operation and employs almost all of the remaining 300 workers.

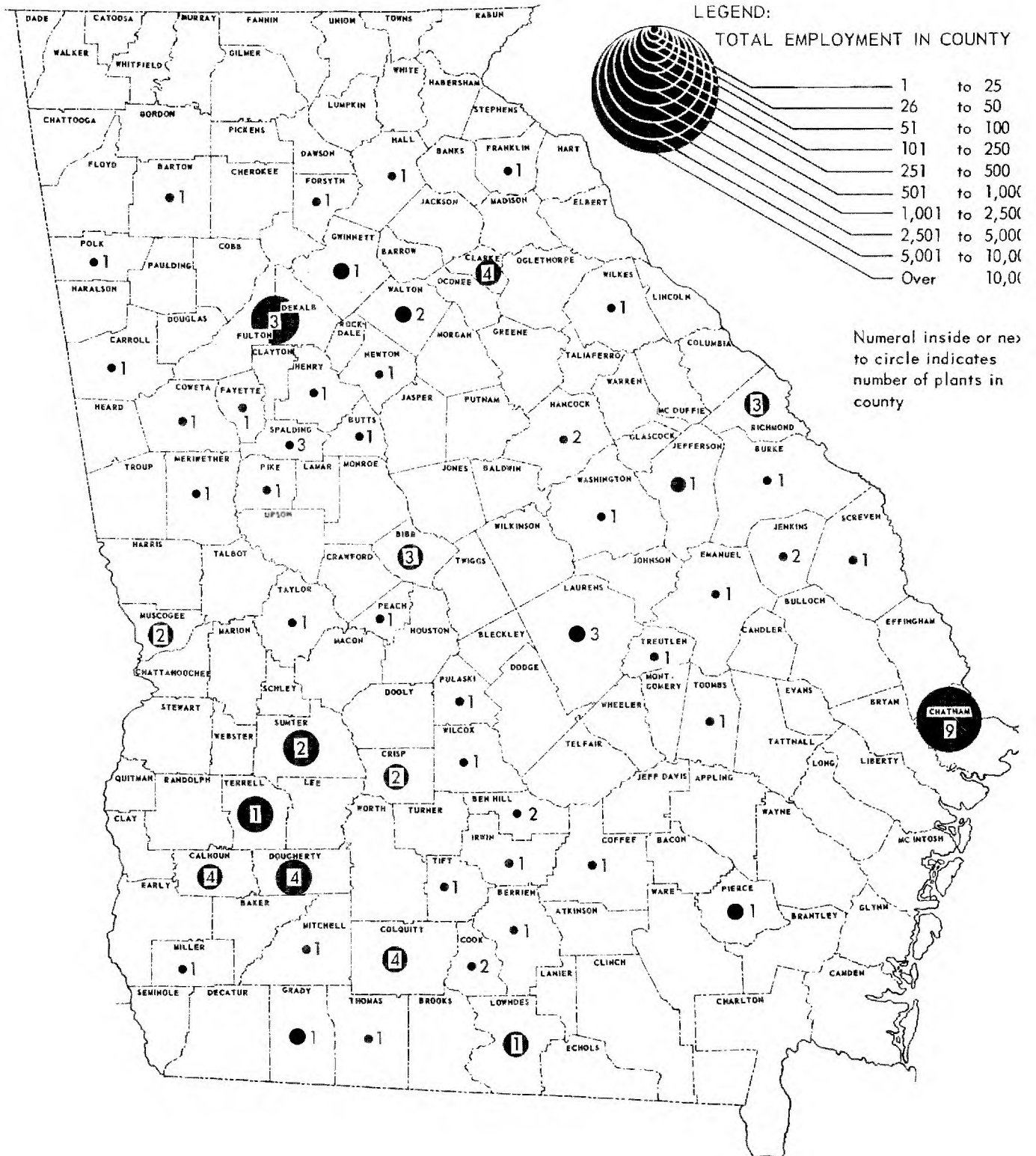
Located in Bibb, Cobb, Fulton, Laurens, Muscogee, Polk and Rockdale counties are the 11 manufacturers of penetrants, emulsifiers and wetting agents. Approximately 350 are employed in this segment of the chemical industry. Five plants (total employment 115) are in Fulton County. The largest operation (over 150 workers), however, is found in Polk County.

Seven firms, five of which are in Fulton County, manufacture perfumes and cosmetics. The other two are in Bartow and Chatham counties. All of these operations are small, with none employing over 26 workers.

Four of the six manufacturers of glue and gelatin are found in Fulton County which has 75 of the State's 125 employees. The other plants are located in Gwinnett and Lowndes counties.

Among larger firms in the chemical industry are American Cyanamid Company, Pigments Division, Savannah (industrial inorganic chemicals); Celanese Fibers Company Division of Celanese Corporation of America, Rome (rayon and acetate yarns); Hercules Powder Company, Brunswick (naval stores); and J. M. Huber Corporation, Huber (kaolin clays and printing ink).

MAP 5-A FERTILIZER



CHEMICALS AND ALLIED PRODUCTS

Fertilizer

Agricultural chemicals comprise the largest segment of Georgia's chemical industry. This group includes establishments primarily engaged in manufacturing fertilizers, agricultural pesticides and other agricultural chemicals. Georgia has 105 plants classed in this group, which are found in 58 counties and employ almost 3,300 workers.

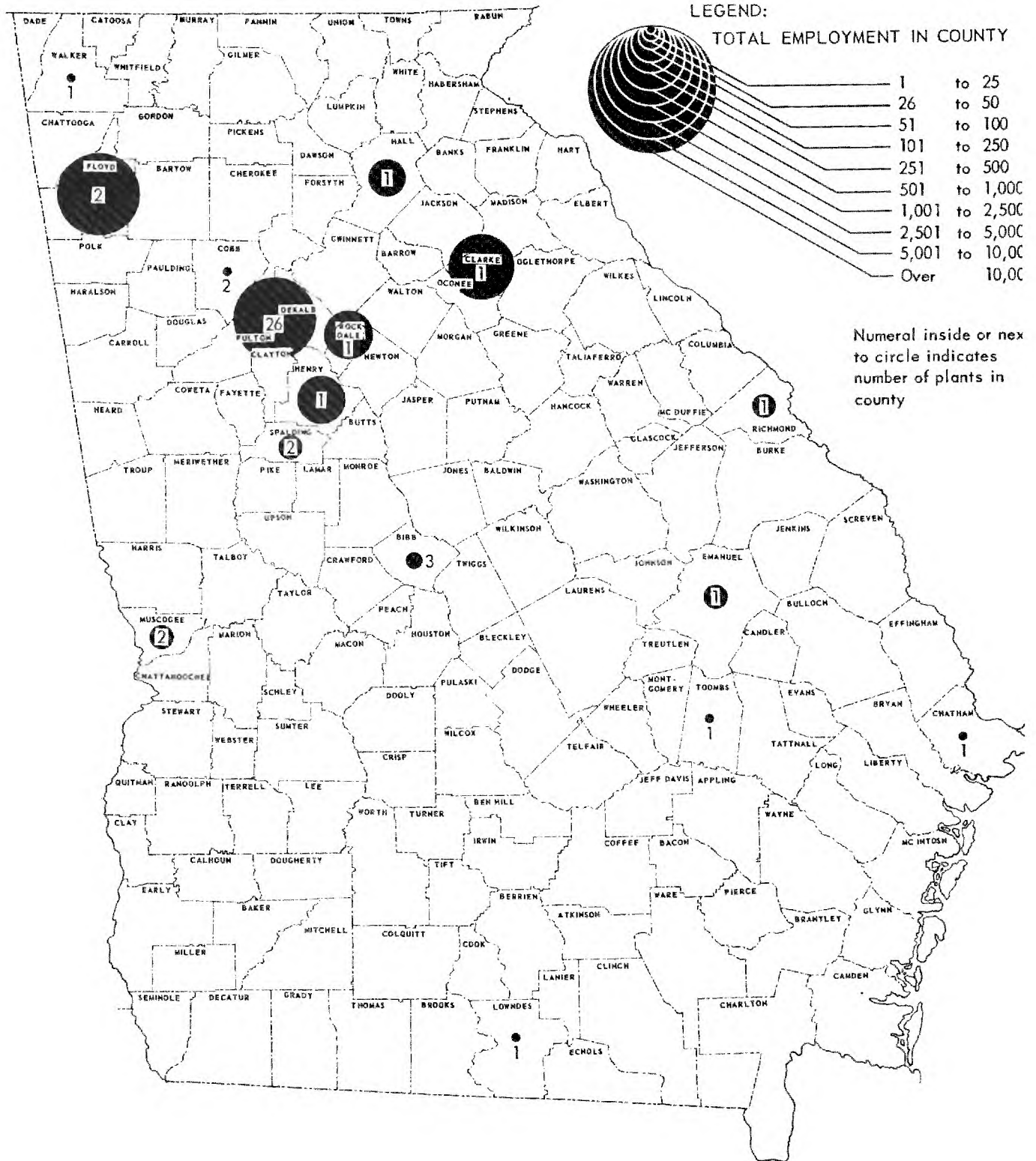
The manufacture of pesticides comprises only a small segment of the agricultural chemicals, accounting for less than 10% of the plants and workers. These plants are located in Bibb, Burke, Decatur, DeKalb, Fulton, Peach, Richmond, Terrell and Tift counties. Fulton is the only county with two plants. Woolfolk Chemical Works, Ltd., at Fort Valley is the largest manufacturer of pesticides in the State, with its total employment exceeding 100 workers. Pesticides are included on Map 5.

The accompanying map shows the location of Georgia's 95 fertilizer operations, which have a combined employment of about 3,000 workers. Of these, 19 plants manufacture fertilizers, while the remaining mix fertilizers from purchased materials. The 19 manufacturing plants are found in Bibb, Chatham, Clarke, Crisp, Dougherty, Forsyth, Fulton, Hall, Lowndes, Polk, Sumter and Tift counties.

Manufacturing plants usually are larger operations than mixing plants. Sixty-one of the 76 mixing operations employ fewer than 26 workers, whereas only four of the manufacturers fall into that employment range. Moreover, only four of the mixing plants employ more than 51 workers, while 10 of the manufacturers have a work force that exceeds 51 and two of these employ more than 200 workers.

Chatham County, with one-fourth of the State's employment, is the center of the fertilizer industry in Georgia. Fulton ranks second with 300 employed in three plants. Largest employers include International Minerals & Chemical Corporation, Americus; The Tennessee Corporation, East Point; Southern Fertilizer & Chemical Company, Savannah; and Southern Nitrogen Company, Inc., Savannah.

MAP 6 ELECTRICAL MACHINERY



ELECTRICAL MACHINERY

Electrical machinery -- the State's fourteenth ranking manufacturing activity -- has a total of 47 operations employing slightly more than 5,000 workers. While this industry is rather scattered and is represented in all but one metropolitan area (Albany), the greatest concentration of plants is in north Georgia, where Fulton and adjacent counties serve as its nucleus. Cobb, DeKalb, Fulton, Henry, Rockdale and Spalding have 32 of the plants and nearly 60% of all employment. Floyd, Clarke and Hall are the next ranking counties, with over one-third of the State's workers in only four plants.

Even though total employment in electrical machinery is not significant when related to other major industry groups, the variety of products manufactured is numerous. Power distribution and specialty transformers, switch gear and electrical controls, industrial motors and generators, electric housewares and fans, lighting fixtures, cathode ray picture tubes, transistors and electronic equipments, storage batteries, and new and rebuilt starters, armatures and generators for internal combustion engines are examples of the many items represented.

Production of electrical transmission and distribution equipment is the most significant product line, with 11 plants employing nearly two-thirds of the total employed in the electrical machinery group. Storage batteries rank second with nine plants and 11% of the workers, followed closely by electric lighting and wiring equipment, with five plants and 10% of all workers. Six plants in Georgia manufacture electronic components and accessories, but their combined employment accounts for less than 3% of the total.

The manufacture of electrical transmission and distribution equipment is located in Clarke, DeKalb, Floyd, Fulton and Henry counties. Fulton and Rockdale are the only counties where electric lighting and wiring equipment are produced. Fulton County is the manufacturing center for storage batteries, but they are also produced in Bibb, Chatham, Muscogee and Toombs counties. Excepting the Fulton-DeKalb area, where all product lines are represented, the county and product manufactured are shown below:

Bibb - electronic components

Cobb - electronic components and electro magnets

Emanuel - door bells and chimes

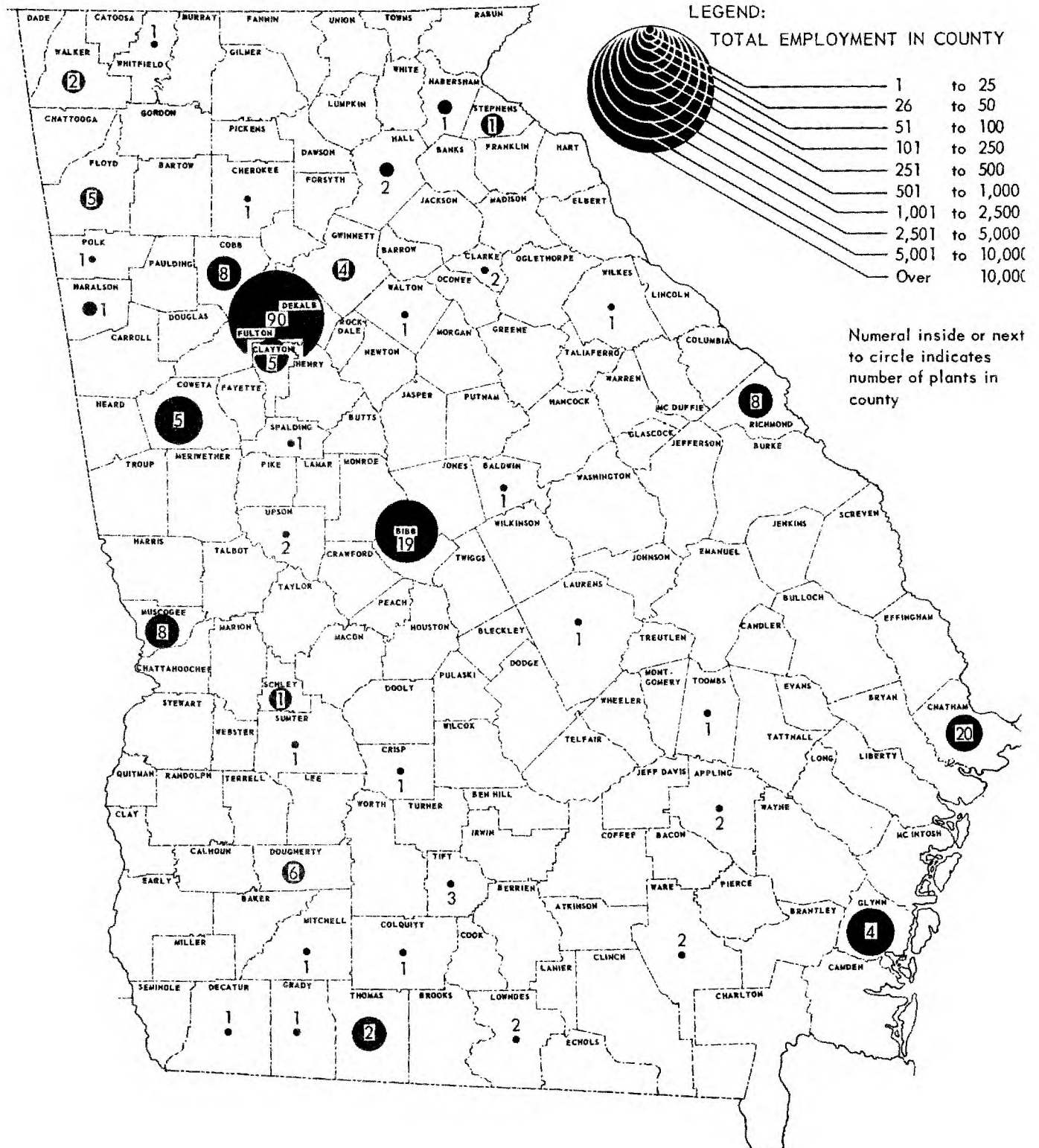
Floyd - TV antennas and telephone amplifiers

Hall - industrial motors and generators
Lowndes - electric space heaters
Muscogee - rebuilt starters, generators and armatures
Richmond - TV picture tubes
Spalding - TV picture tubes and quartz crystals
Walker - electric space heaters

In this major industry group, plant size varies from only a very few workers to more than 1,000. Twenty-three plants employ fewer than 26 workers; 17 employ 100 or more. Of Georgia's six largest plants in the electrical machinery field, five manufacture electrical transmission and distribution equipment. Three of these employ more than 500 workers each.

Ranked by size, the largest plants in the electrical machinery field are General Electric Company, Rome (medium transformers); Westinghouse Electric Corporation, Athens (distribution transformers); Southern States Equipment Corporation, Hampton (switchgear, electrical controls); Walker Electric Company, Inc., Atlanta (electric service equipment); Lithonia Lighting, Inc., Conyers (fluorescent lighting fixtures); and Westinghouse Electric Corporation, Atlanta (switchgear, electrical controls).

MAP 7-A FABRICATED STRUCTURAL METAL PRODUCTS



FABRICATED METAL PRODUCTS

The manufacture of fabricated metal products is Georgia's tenth ranking major industry complex. Employment in this group has more than tripled over the past 20 years. In 1939 approximately 2,200 were engaged in the manufacture of fabricated metal products in Georgia, and by 1960 total employment exceeded 9,700.

While 19 of a possible 27 metal product groups are represented in Georgia, only two -- sheet metal works and metal stampings -- are significant. Sheet metal works account for 23% and metal stampings 16% of the industry's employment. The next largest group, fabricated structural steel, accounts for less than 10% of the workers.

Two maps are used to show the location of the fabricated metal products industry in Georgia. Fabricated structural metal products, the most homogeneous grouping, is shown on Map 7-A. This grouping accounts for 55% of all employment. Map 7-B shows the remaining fabricated metal products. Nearly 4,400 are employed in this group of 85 plants.

Fabricated Structural Metal Products

Fabricated structural metal products include fabricated structural steel, metal doors, sash, fabricated plate work (boiler shops), sheet metal work and architectural and miscellaneous metal work. Georgia has about 5,400 workers employed in 220 plants that are reasonably well dispersed over the State, with one or more plants found in 41 counties. Nearly half of the employment is concentrated in the Fulton-DeKalb area's 90 plants. Moreover, nearly three-fourths of all employment is concentrated in six counties -- Bibb, Chatham, Coweta, DeKalb, Fulton and Glynn. Total employment in each of these counties exceeds 200 workers.

Sheet metal works outnumber the other four groups by a wide margin, accounting for 132 of the 220 firms, but they account for less than 45% of total employment. Only seven of the 41 counties -- Gwinnett, Habersham, Laurens, Macon, Mitchell, Stephens and Sumter -- have no sheet metal works.

Structural steel firms are the next largest employers in the State, with 21 plants employing about 950 workers. These plants are found in Georgia's six standard metropolitan areas and in Appling, Glynn and Stephens counties. The 12 firms in the Atlanta area employ 57% of the workers.

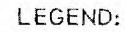
Georgia has 12 boiler shops employing 900 workers. Glynn and Coweta counties, with three shops, are the leading employment centers in this group. Combined employment exceeds 500 in these two counties. The other nine operations are in Bibb, Chatham, DeKalb, Fulton, Thomas and Walker counties.

Metal doors, sash, frames, molding and trim are manufactured in 24 plants which employ a little over 900 workers. More than 750 of these employees work in the 16 plants located in the five-county Atlanta Metropolitan Area. The remaining plants are found in Bibb, Chatham, Habersham, Macon, Mitchell and Sumter counties.

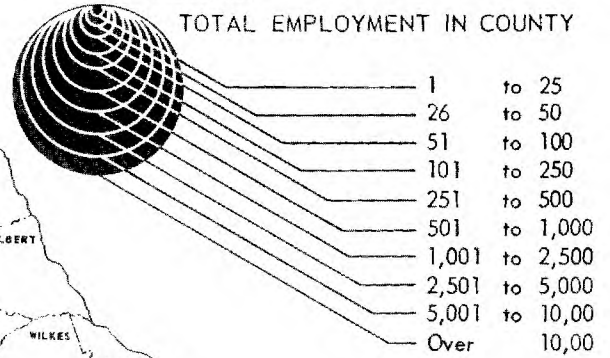
Only six of the 31 firms classified as primarily engaged in the manufacture of architectural and miscellaneous work of the ferrous and non-ferrous metals category are outside Georgia's six metropolitan areas. These plants are located in Floyd, Laurens, Tift, Upson and Ware counties. Of the more than 380 employed in this group, 225 work in 15 shops in the Atlanta Metropolitan Area.

Most of the fabricated structural metal firms are small operations. Some 167 plants employ fewer than 26 workers and only 12 employ 100 or more. The average employment in the small firm category (1-25 employees) is nine workers. The four largest firms in the State are American Art Metals Company, Atlanta (metal doors, sashes, etc.); Babcock & Wilcox Company, Brunswick (steel boilers); R. D. Cole Manufacturing Company, Newnan (steel tanks and boilers); and Taylor Iron Works & Supply Company, Macon (structural steel).

MAP 7-B



TOTAL EMPLOYMENT IN COUNTY



Numerals inside or next to circle indicates number of plants in county

FABRICATED METAL PRODUCTS

Fabricated Non-structural Metal Products

This grouping includes metal cans; hardware; cast iron sanitary ware; plumbing fixture fittings; heating equipment; screw machine products; screws; metal stampings; coating, engraving and allied services; fabricated wire products; fabricated metal drums and barrels; valves and pipe fittings; fabricated pipe and fittings; and miscellaneous products.

Nearly 4,400 are employed in the 85 plants included in this grouping. The five-county Atlanta Metropolitan Area has 39 of these plants and almost 35% of the workers. Six other counties -- Carroll, Chatham, Colquitt, Cook, Lowndes and Putnam -- each has a work force that exceeds 200.

The 18 firms producing metal stampings employ approximately 1,600 workers. These operations are located in Carroll, Chatham, Cook, Coweta, DeKalb, Fulton, Haralson, Lowndes, Muscogee, Oglethorpe, Putnam, Rabun and Stephens counties, the largest being in Putnam and Lowndes.

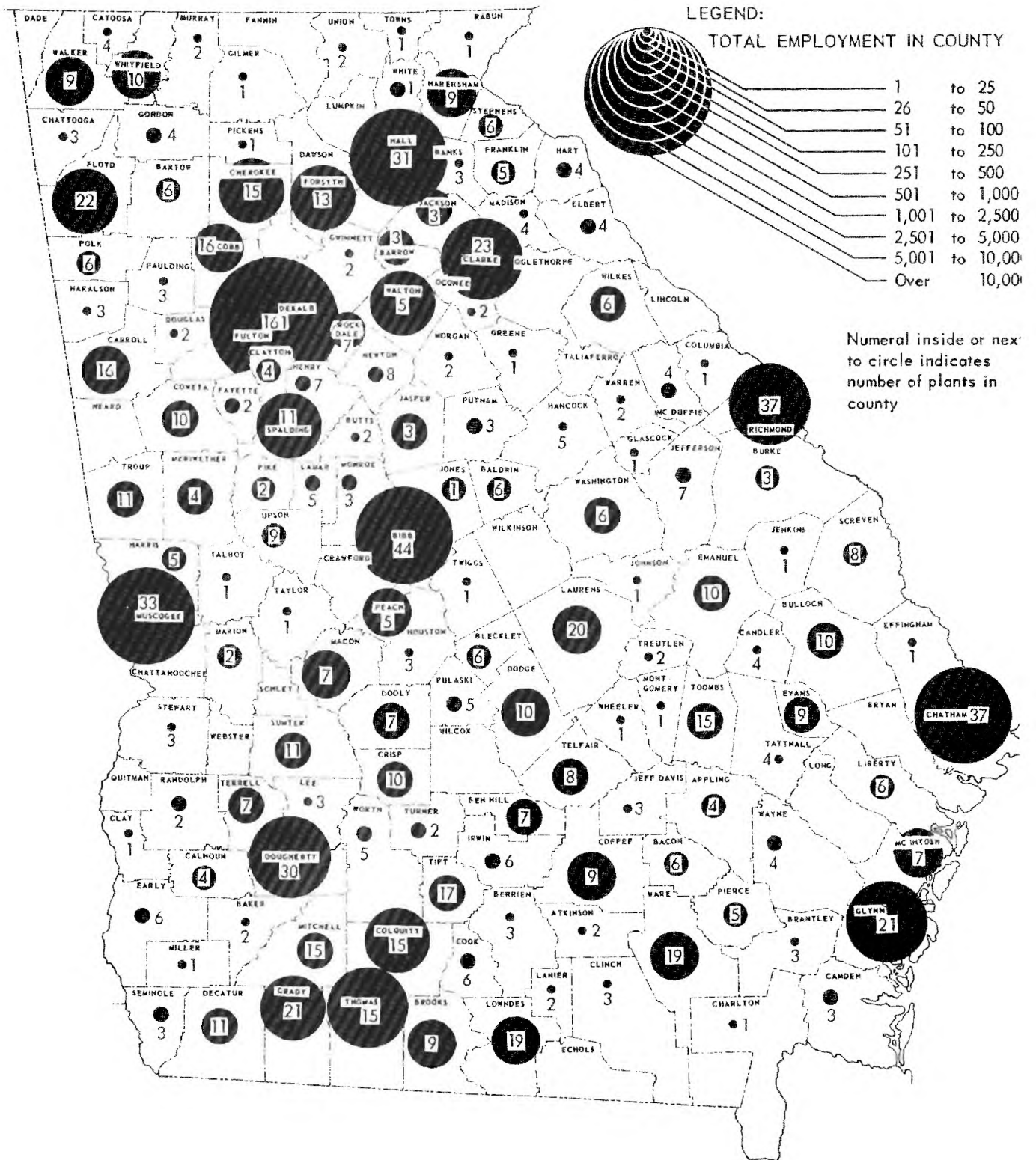
Eight of the 13 coating, engraving and allied services firms are located in Fulton County. However, these firms account for only 40% of the approximately 425 employees in the industry. The remaining plants are located in Carroll, Cook, DeKalb, Rockdale and Troup counties, with Cook and Carroll having the largest establishments.

Chatham, Clayton and Fulton counties are the locations of the four metal can manufacturers, which together employ fewer than 550 workers. Three of these plants, including the largest, are in the Atlanta area.

Heating equipment is manufactured in Burke, Floyd and Fulton counties. The largest of the three plants is in Fulton.

Of the 85 plants in this grouping, 50 are very small (1-25 employees). Eighteen employ 100 or more workers, five of which exceed 200 employees. Among the larger plants are Bridgeport Brass Company, Moultrie (plumbing fixture fittings); Crown Cork & Seal Company, Atlanta (metal cans); Douglas & Lomason Company, Carrollton (metal stampings); The Enterprise Aluminum Company, Eatonton (metal stampings); and Thompson Industries, Inc., Valdosta (metal stampings).

MAP 8 FOOD AND KINDRED PRODUCTS



FOOD AND KINDRED PRODUCTS

In 1960, the food industry was the State's third ranking industry in terms of total employment. The fact that the industry ranked second in 1958 does not reflect a deceleration in growth.^{1/} Actually, the industry has grown constantly since 1947 and has gained in significance relative to the U.S. total. Georgia is the nation's leading processor and exporter of poultry. Other principal export items are seafood, fruits and vegetables, biscuits and crackers, soft drink syrups and certain of the prepared food lines.

Discounting the demands of increasing local consumption as it relates to population expansion, the industry's growth is attributable to diversification in farming practices and the trend toward more and larger commercial farms within the State. In the fruits and vegetables lines the climate in south Georgia permits a year-round growing season so that two and even three crops can be produced in a 12-month period. The growth and expansion of grain mills is directly related to the growth of the poultry and livestock industry in Georgia.

More than 49,000 are employed in the 1,172 plants comprising the food industry in Georgia. Except for the lumber and wood products industry and the printing and publishing industry, no other major industry group has as broad a geographical coverage -- 141 counties. Activity in the foods line tends to locate in or near centers of population as indicated on the accompanying map. The perishability of many food products results in their being market oriented. The need for a large labor pool is another reason why many of the food operations locate in the more populous areas. Only 11 counties -- Bibb, Chatham, Clarke, Dougherty, Fulton-DeKalb, Glynn, Hall, Muscogee, Richmond and Thomas -- account for 432 plants and 33,082 employees, or about 37% of the plants and 67% of the workers in the State's food industry. These counties have about 43% of Georgia's total population. Moreover, 32 counties (each with more than 250 employees) have a total of 699 plants (60% of the total number) and 42,927 employees (88% of the total). These counties account for 60% of the State's population.

For purposes of analysis and presentation, Georgia's food industry has been subdivided into six groups -- meat, poultry and seafood (Map 8-A); dairy

^{1/} See Table 6, page 9.

products (Map 8-B); grain mills (Map 8-C); bread, bakery and confectionery products (Map 8-D); beverages (Map 8-E); and miscellaneous food products. The miscellaneous segment is included in Map 8, Food and Kindred Products. This group, because of its size and diversity of products has been analyzed separately below.

Miscellaneous Food Products

Fruits and vegetables, flavorings, food preparations, animal and vegetable fats and oils, manufactured ice, and sugar refining comprise the miscellaneous segment of the food industry.

This miscellaneous segment accounts for about one-fourth of all establishments and employment in the State's food industry complex. Some 288 plants provide employment for over 11,650 workers. Slightly over 70% of the plants in this group are small, employing less than 26 workers; 85% employ less than 51 workers. Only 22 of the 288 plants employ more than 100 workers; five of these employ 500 or more.

Georgia's fruits and vegetables industry, with 48 plants employing about 3,370 workers, accounts for less than 5% of the establishments and only 6.9% of the employees in the State's total food complex. Three lines -- canned, pickled, and frozen fruits and vegetables -- are the most significant. Dried fruits and vegetables and canned specialties are of minor importance. Canning operations provide jobs for about 1,500 workers in 22 plants. Pickled fruits and vegetables operations provide jobs for slightly more than 1,000 workers in 11 plants. The nine frozen food plants employ about 600.

While these industries are seasonal, half of the plants employ from one to 25 workers and almost 80% of the plants employ less than 100 workers. Of the 20% that employ more than 100 workers, 10 plants account for nearly three-fourths of the total employment in the fruits and vegetables industry. Total employment within this group varies from around 2,500 in the off season to as much as 5,000 to 6,000 during the peak of the harvest season.

The greatest concentration of plants and workers is in the Fulton-DeKalb area, where 13 plants employ nearly 600 workers. Bibb, Grady and Macon counties are next in order of total employment. These five counties together account for three-fifths of the employees in the fruits and vegetables industry in Georgia.

The six largest companies in the fruits and vegetables industry, each employing over 200 workers, are Cairo Pickle Company, Cairo (pickles); Blue

Plate Foods, Inc., Atlanta (pickles); Kraft Foods, Atlanta (pickles); Southern Frozen Foods, Inc., Montezuma (frozen vegetables); Pomona Products Company, Griffin (canned vegetables); and Bateman Canning Company, Macon (canned fruits and vegetables).

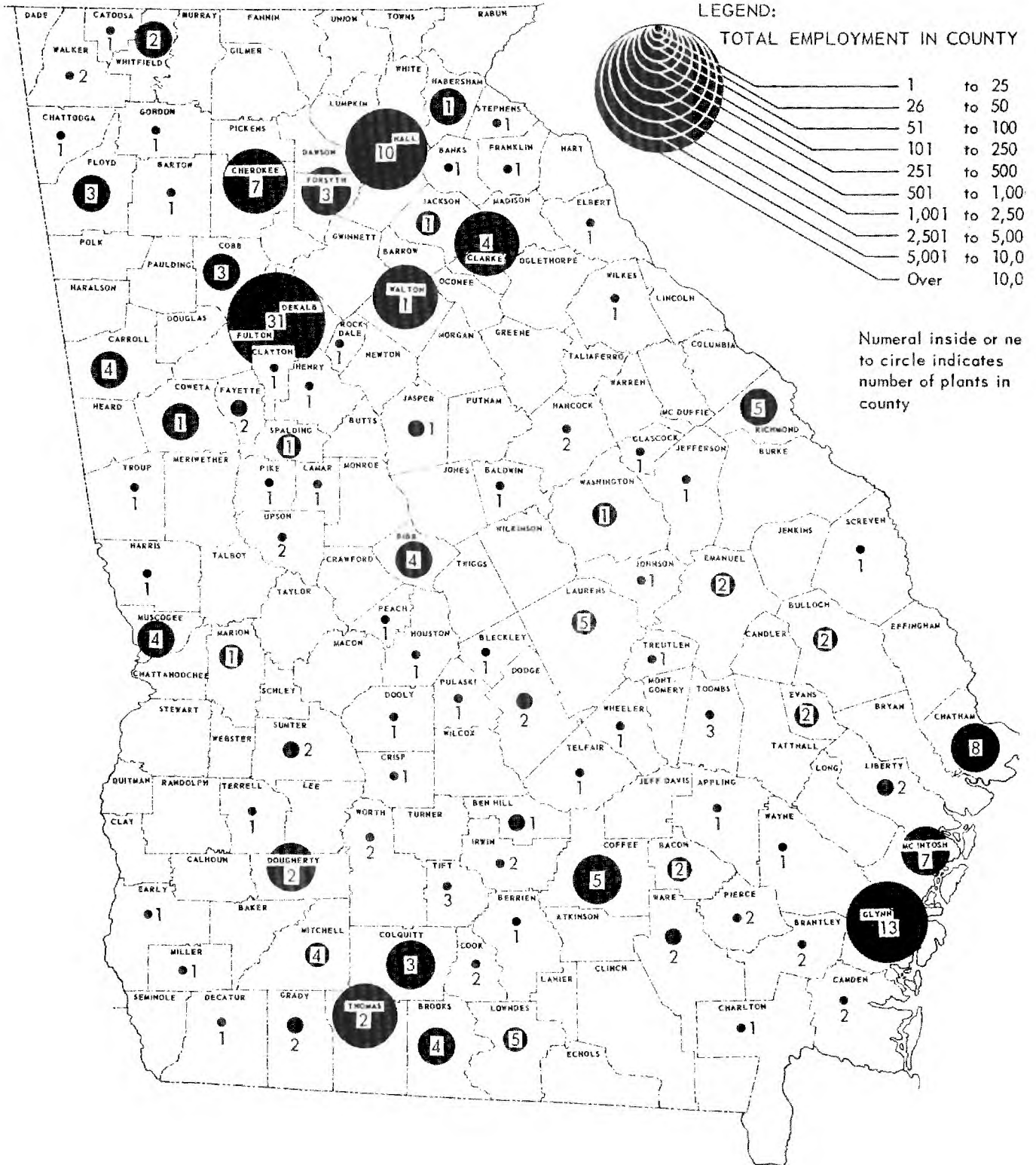
Over 4,700 are employed in the 102 plants that manufacture flavorings and food preparations. The heaviest concentration of these plants is found in the Atlanta area, where 30 plants employ over 2,500 workers. The remainder of the plants are relatively well dispersed over the southern half of the State in 36 counties.

The manufacture of animal and vegetable fats and oils is found in 17 counties. The big cities (Atlanta, Savannah, Macon and Augusta) account for 16 of the 31 plants and nearly 70% of the total employment (1,450) in this group of industries.

Georgia's 106 ice plants (total employment 1,231) are dispersed throughout the State, with 85 counties having one or more plants. Of this miscellaneous group, ice plants are the smallest operations, with 97 plants employing less than 26 workers and 104 plants employing 50 or less.

Georgia has one sugar refinery, Savannah Sugar Refining Corporation, which is one of the largest plants in this miscellaneous group. Other large plants are The Coca Cola Company, Atlanta (syrup); Royal Crown Cola Company, Columbus (syrup); The Atlantic Company, Atlanta (ice); Gordon Foods Division of Sunshine Biscuits, Inc., Atlanta (potato chips and snack items); and Frito-Lay, Inc., Chamblee (potato chips and snack items).

MAP 8-A
MEAT, POULTRY AND SEAFOOD



FOOD AND KINDRED PRODUCTS

Meat, Poultry and Seafood

The meat, poultry and seafood group, with over 15,000 workers employed in 229 plants, accounts for 20% of all plants and 31% of the employees in the food industry in Georgia. Based on employment, the poultry industry is the most significant of this group, accounting for nearly 45% of all workers.

Meat packers and processors of prepared meats account for two-thirds of the plants but only 39% of the employees. The 27 seafood processing operations provide jobs for only 17% of the employment. Meat packing, prepared meats and seafood plants tend to be small operations -- 165 of the State's 180 plants employ fewer than 100 workers. Poultry processors generally are much larger, with 22 of the 49 plants in Georgia employing more than 100 workers.

Meat packers, the most numerous of this group with 110 plants, are generally well dispersed over the State (64 counties), with heaviest concentration in the larger cities. Georgia's six metropolitan areas (Albany, Atlanta, Augusta, Columbus, Macon and Savannah) have, in 29 plants, almost 2,000 of the 4,300 workers employed in the meat packing industry. For the most part these plants are very small, with over 70% of the plants employing from one to 25 workers.

With few exceptions the prepared meats operations tend to locate in or near urbanized areas of 10,000 population or more. Of Georgia's 43 plants, 13 are located in or adjacent to the Atlanta Metropolitan Area and account for over 55% of the nearly 1,600 employed in this industry. Plants processing prepared meats are likewise very small; 65% employ less than 26 workers and none employs as many as 150 workers.

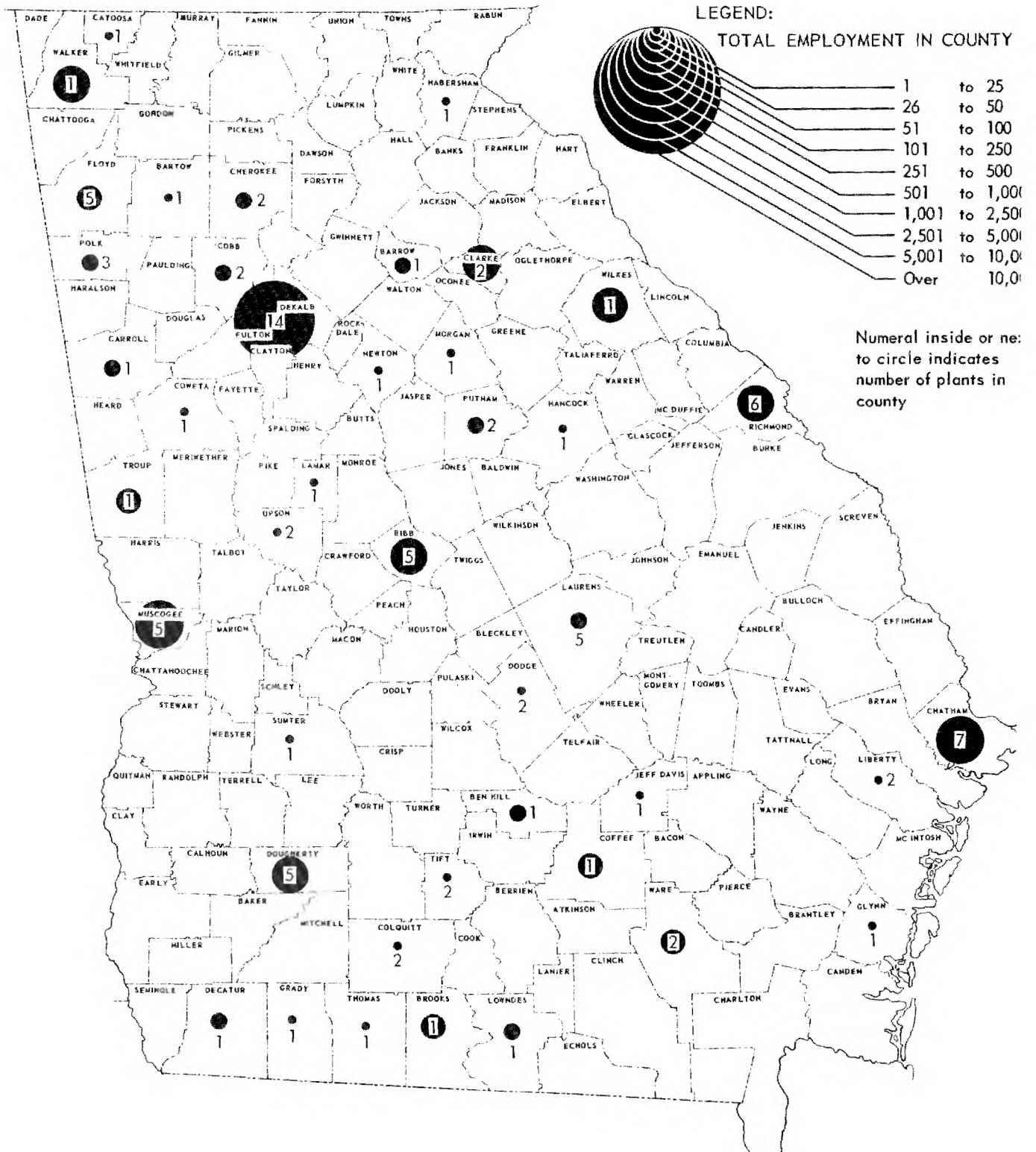
Poultry processing is centralized in north Georgia, with Hall and Cherokee counties having the greatest number of plants (17), which employ 47% of the poultry workers. This industry, however, is beginning to spread into other areas of the State, particularly south Georgia. Farmers in the tobacco and cotton belts have started to raise chickens as a means of diversifying farm operations and providing year-round employment for farm workers. Poultry processing plants are relatively large operations -- nine of the

State's 49 plants employ over 300 workers -- and these plants account for 57% of all employment in the poultry industry.

All of Georgia's seafood plants are located on the coast in Camden, Glynn, McIntosh, Liberty and Chatham counties, except for one plant each in Brooks and Jasper counties. Eight of the State's 27 plants, each employing more than 100 workers, account for over 60% of the industry's workers. Glynn County is the center of the seafood industry in Georgia, with 11 plants employing nearly 1,700 workers -- 67% of the employees in this industry.

Of the largest food plants in the State (over 500 workers) two are meat packers, two are poultry processors and one is a processor of fresh and frozen fish. They are Sunnyland Packing Company, Thomasville (meat); White Provision Company, Atlanta (meat); Jesse D. Jewell, Inc., Gainesville (poultry); Southern Poultry Company, Inc., Monroe (poultry); and Sea Pak Corporation, St. Simons (seafood).

MAP 8-B DAIRY PRODUCTS



FOOD AND KINDRED PRODUCTS

Dairy Products

The dairy products segment of the food industry in Georgia accounts for only 8% of the industry's establishments and 9% of its employment. Located in 43 counties, some 98 plants employ more than 4,350 workers.

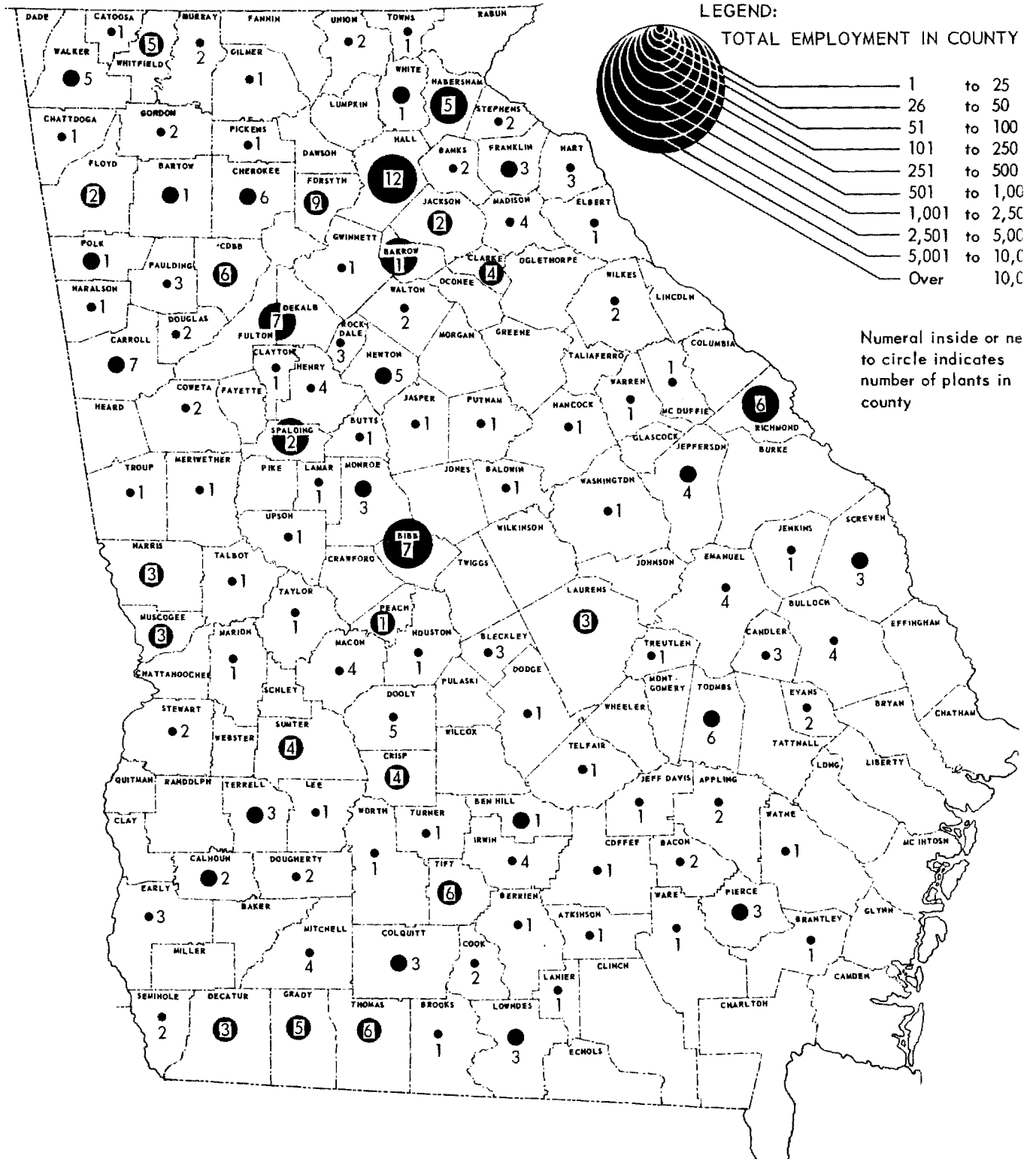
Dairy products are market oriented, as evidenced by the accompanying map. Georgia's six metropolitan areas plus Walker County (Chattanooga Metropolitan Area) and Clarke County account for 47 plants (48%) and 3,336 workers (76%).

While there are a limited number of establishments in Georgia producing condensed milk, creamery butter, cheese and other special dairy products, the production of fluid milk and ice cream for local consumption are, respectively, the most significant dairy products. Almost 70% of the establishments (67) in the dairy line produce fluid milk, which accounts for three-fourths of all workers. Three-fifths of these producers employ less than 26 workers and seven-eighths employ less than 100 workers. However, the one-eighth employing over 100 workers account for 55% of all employees engaged in the production of fluid milk.

Almost one-fourth of the plants produce ice cream and related products. Ice cream plants in general are small, with three-fourths of the firms employing less than 26 workers and only two plants employing more than 100 workers. With few exceptions, such plants are located in the more populous areas of the State.

None of the plants in the dairy products line employs as many as 300 workers and only five employ over 200 workers. They are Kraft Foods, Inc., Decatur (processed cheese); Happy Valley Farms, Rossville (fluid milk); Irvindale Farms Dairy, Atlanta (fluid milk); National Dairy Products, Atlanta (fluid milk); and Wells Dairies Cooperative, Columbus (fluid milk).

MAP 8-C GRAIN MILLS



FOOD AND KINDRED PRODUCTS

Grain Mills

With 290 plants employing about 4,000 workers, grain mills account for one-fourth of the plants but less than 10% of all employment in Georgia's food industry. Located in 104 counties, they have the widest geographical dispersal of any segment of the food industry. Moreover, only three other industries in the State (printing and publishing, logging camps and sawmills) exceed that of grain mills in geographical coverage.

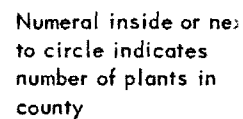
Feed mills and flour mills comprise the grain mill operations within Georgia. The 233 feed mills employ over 3,100 workers and the 57 flour mills employ nearly 900 workers.

With the exception of four large mills (100 or more employees), grain mills in the State are small operations. Nearly 85% of the plants employ less than 26 workers; 96% employ 50 or less.

The poultry industry with Gainesville as its center, the livestock industry with Macon as its center, and livestock marketing at Augusta have resulted in Hall, Bibb and Richmond counties becoming the State's grain mill centers.

The four largest grain mill operations in the State are Happy Vale Flour Mills, Griffin (flour); Birdsey Flour & Feed Mills, Macon (flour and feed); Harrison Poultry Company, Bethlehem (feed); and Ralston Purina Company, Macon (feed).

BREAD, BAKERY AND CONFECTIONARY PRODUCTS



FOOD AND KINDRED PRODUCTS

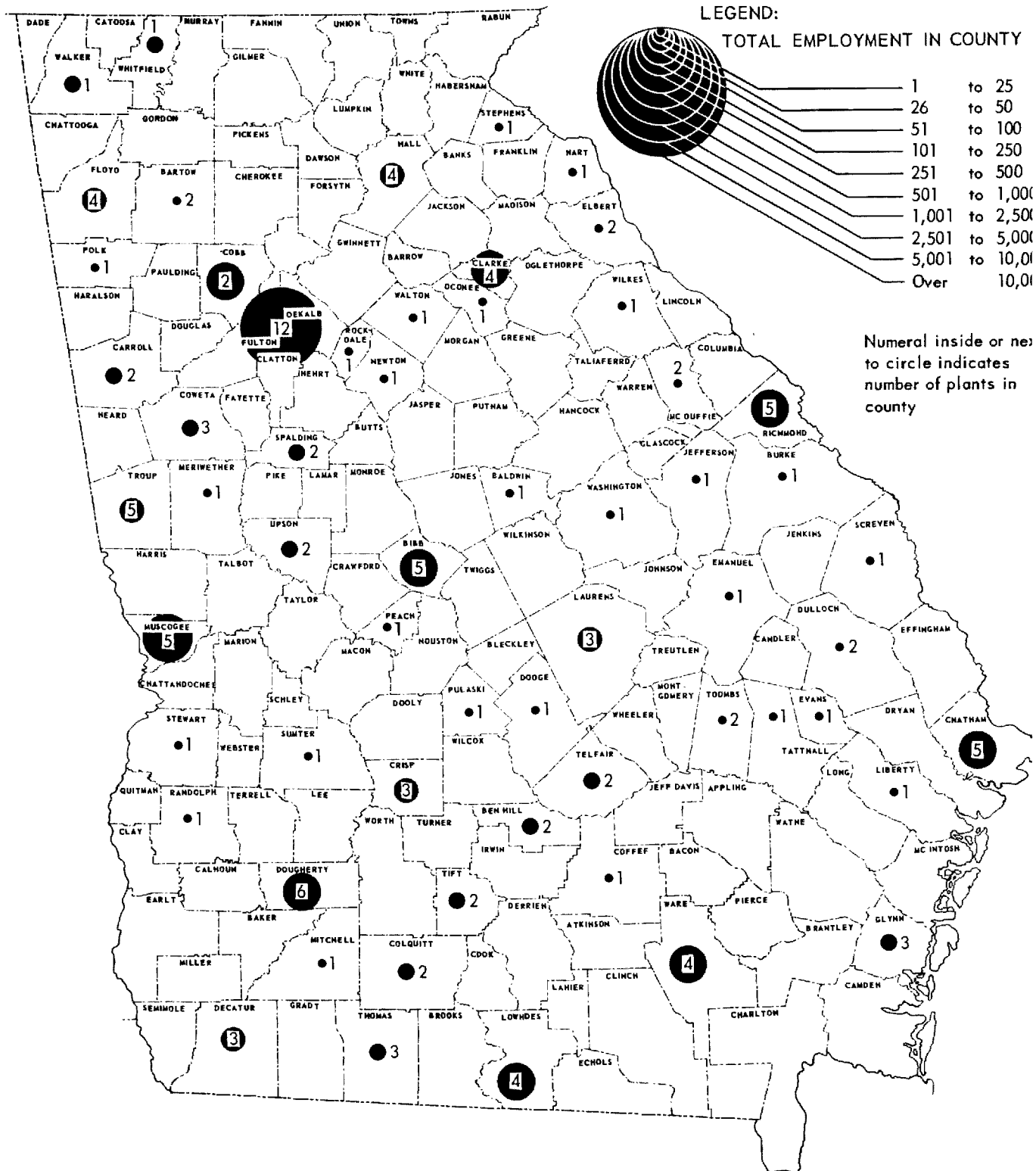
Bread, Bakery and Confectionery Products

Bread, bakery and confectionery products comprise the second most important segment of Georgia's food industry. Over 9,700 are employed in 132 plants, accounting for 11% of the establishments and one-fifth of all employment in the State's food industry. The manufacture of bread, biscuits, crackers and other bakery products accounts for 80% of the plants and over three-fourths of the workers.

With plants located in 37 counties, reasonably well dispersed geographically, these operations are nevertheless concentrated in the major market areas of the State. Georgia's six standard metropolitan areas have nearly two-thirds of all plants and seven-eighths of the employment. The Atlanta area alone has about one-third of the total operations and nearly 40% of the employees.

While plants employing 100 workers or less outnumber the plants employing over 100 by a ratio of 4 to 1, the larger plants account for 78% of the total employment. Of the 85 plants employing fewer than 26 workers, 70 are in the bread and bakery line. Three plants have an average employment in excess of 500. They are National Biscuit Company, Atlanta (crackers); Sunshine Biscuit Company, Columbus (crackers); and Tom Huston Peanut Company, Columbus (candy).

MAP 8-E BEVERAGES



FOOD AND KINDRED PRODUCTS

Beverages

The beverage segment accounts for slightly over 11% of the establishments but only 8% of employment in the food industry in Georgia. Some 135 plants employ nearly 4,200 workers.

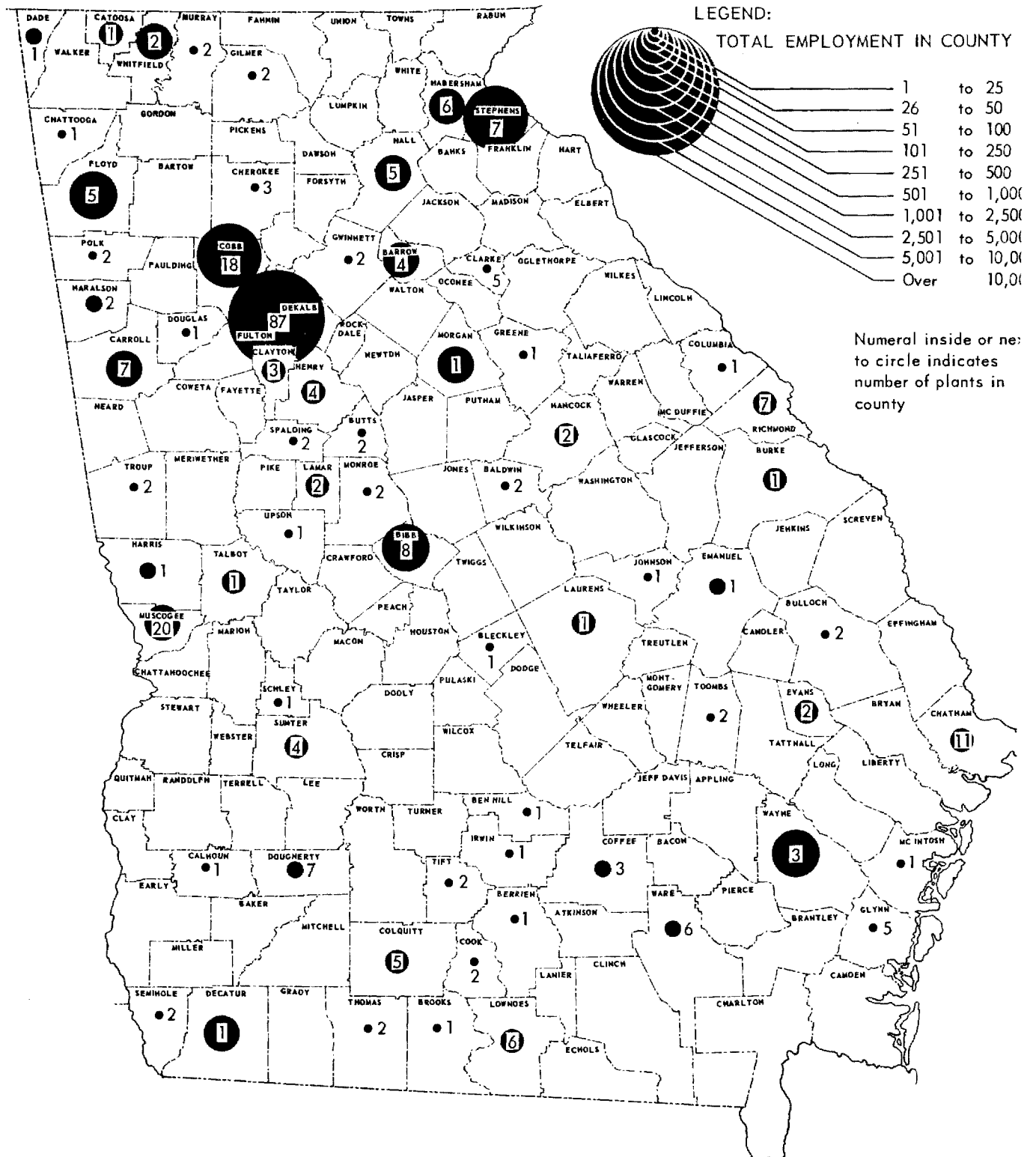
All of the plants classed in the beverage line bottle soft drinks except four -- a distillery, a brewery, and two wineries. Viking Distillery, manufacturer of "Georgia Moon," is located in Albany. Carling Brewing Company, Monarch Wine Company of Georgia and Hill-N-Dale Wine Company are located in Atlanta.

The soft drink industry is relatively well dispersed over the State, with 60 counties having one or more bottling plants. Only three other types of activity in the food industry have a larger geographical coverage -- prepared animal feed mills (104 counties), ice plants (85 counties) and meat packing plants (64 counties).

Bottling plants generally are small operations. Plants employing fewer than 26 workers account for nearly a third of the industry's employment and two-thirds of the plants. Moreover, nearly 90% of the bottlers employ less than 51 workers, with total employment amounting to almost 60% of all workers in the soft drink industry.

Only four soft drink plants in the State employ over 100 workers. Two of these are in Atlanta, and two are in Columbus. They are Atlanta Coca Cola Bottling Company and Pepsi Cola Bottling Company in Atlanta, and Columbus Coca Cola Bottling Company and Royal Crown Nehi Bottling Company in Columbus. Carling Brewing Company is the only other beverage company employing over 100 workers.

MAP 9 FURNITURE AND FIXTURES



FURNITURE AND FIXTURES

The furniture industry, ranking twelfth among the major industry groups in the State in employment, is about on a par with the national average for that industry. Georgia has around 8,600 employed in 304 plants.

Since 1930 employment in the furniture industry has increased one and one-half times, but most of this growth occurred between 1939 and 1954. An estimated 3,400 were employed in 1939, over 6,900 in 1954 and still only about 6,900 in 1958.^{1/}

The accompanying map shows the location of all furniture operations in Georgia. Household furniture, shown on Map 9-A, is the most important segment of the industry, accounting for 90% of the employment and 81% of the plants.

Among the major employment centers are the Fulton-DeKalb area and Bibb, Cobb, Floyd, Stephens and Wayne counties. These seven counties account for 128 of the plants and nearly 70% of the workers. Almost 3,000 are employed in the Fulton-DeKalb area alone.

Besides household furniture, four other major product lines -- metal office furniture, public building furniture, wood and metal partitions and venetian blinds and shades -- are manufactured in Georgia. This grouping consists of 59 plants and a total work force of less than 900. Wood partitions and venetian blinds and shades, each with 24 plants and a total employment of 400 and 200, respectively, are the most significant product lines in this grouping.

Wood partitions are manufactured in Chatham, Clarke, Clayton, Coffee, DeKalb, Dougherty, Fulton, Henry, Muscogee, Richmond, Schley, Spalding and Wayne counties. The greatest concentration of workers is found in Fulton County, where about 150 are employed in eight plants. Muscogee has four plants but less than 50 employees. Metal partitions are produced in Cobb, Gilmer and Sumter counties, with Cobb having the largest operation and two of the four plants in Georgia.

Fulton County is also the center of Georgia's venetian blind industry, with almost 130 employed in 10 plants. Chatham and Muscogee counties have

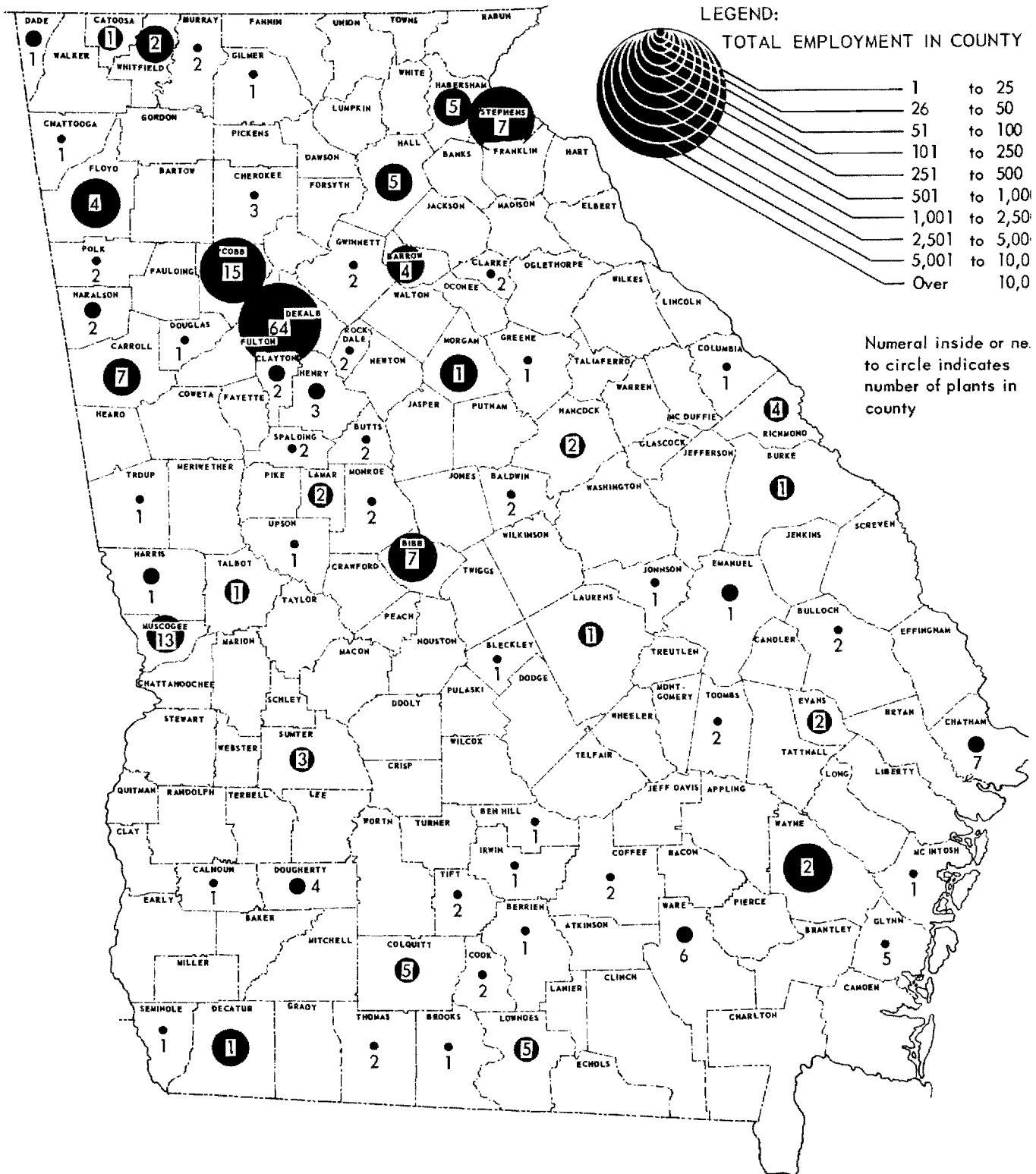
^{1/} Bureau of the Census. 1954 Census of Manufactures and 1958 Census of Manufactures.

three plants each, but total employment in each county is less than 20. The remaining venetian blind plants are in Bibb, Clarke, DeKalb, Dougherty, Floyd, Lowndes, Richmond and Troup counties.

Only one plant in this grouping employs 100 or more workers. Three employ between 51 and 99. Thirty-six of the plants employ fewer than 10 workers. The largest firms in this group are Abrams Fixture Corporation, Atlanta (wood and metal display and store fixtures); Blair Aluminum Furniture Company, Marietta (metal office furniture); Roswell Seating Company, Roswell (wood church and school furniture); and J. P. Womack & Sons, Atlanta (bank and store fixtures).



MAP 9-A
HOUSEHOLD FURNITURE



FURNITURE AND FIXTURES

Household Furniture

Georgia has over 7,700 workers engaged in the manufacture of household furniture. Included in this grouping are 245 plants producing wood furniture (not upholstered), upholstered wood furniture, metal furniture and mattresses and bedsprings.

Some 153 plants employing approximately 3,100 manufacture wood household furniture (not upholstered). The second most important segment of this grouping is mattresses and bedsprings, with 58 plants employing almost 2,000. Upholstered wood furniture employs more than 1,700 workers in 24 plants. The 10 metal household furniture plants employ about 900.

The manufacturers of wood furniture (not upholstered) are found in 53 counties. Stephens County is the center of the industry, with more than 800 employed in seven plants. The Fulton-DeKalb area leads in total number of firms (44), but total employment is only about 450. Bibb County is third with about 350 employed in five plants. Cobb County is the fourth largest employment area, with slightly more than 300 working in 12 plants.

Most of the firms manufacturing wood furniture (not upholstered) are cabinet shops. These shops traditionally are small operations (one to four employees). Using the customary employment range (one to 25 employees) for small plants, 130 firms fall in this class. A further breakdown shows that 106 plants employ fewer than 10 and 85 plants employ fewer than five workers. Only five of the 153 plants employ 100 or more workers.

Like the wood furniture (not upholstered) firms, mattresses manufacturers are for the most part very small operations. Some 30 plants employ fewer than five and 49 employ from one to 25 workers. Only three plants in Georgia employ more than 100 workers.

Fulton County has four of the 10 manufacturers of metal furniture and nearly 300 employees. Cobb County, however, has the State's largest plant. The other metal furniture plants are in Burke, Clarke, Colquitt, Monroe and Rockdale counties.

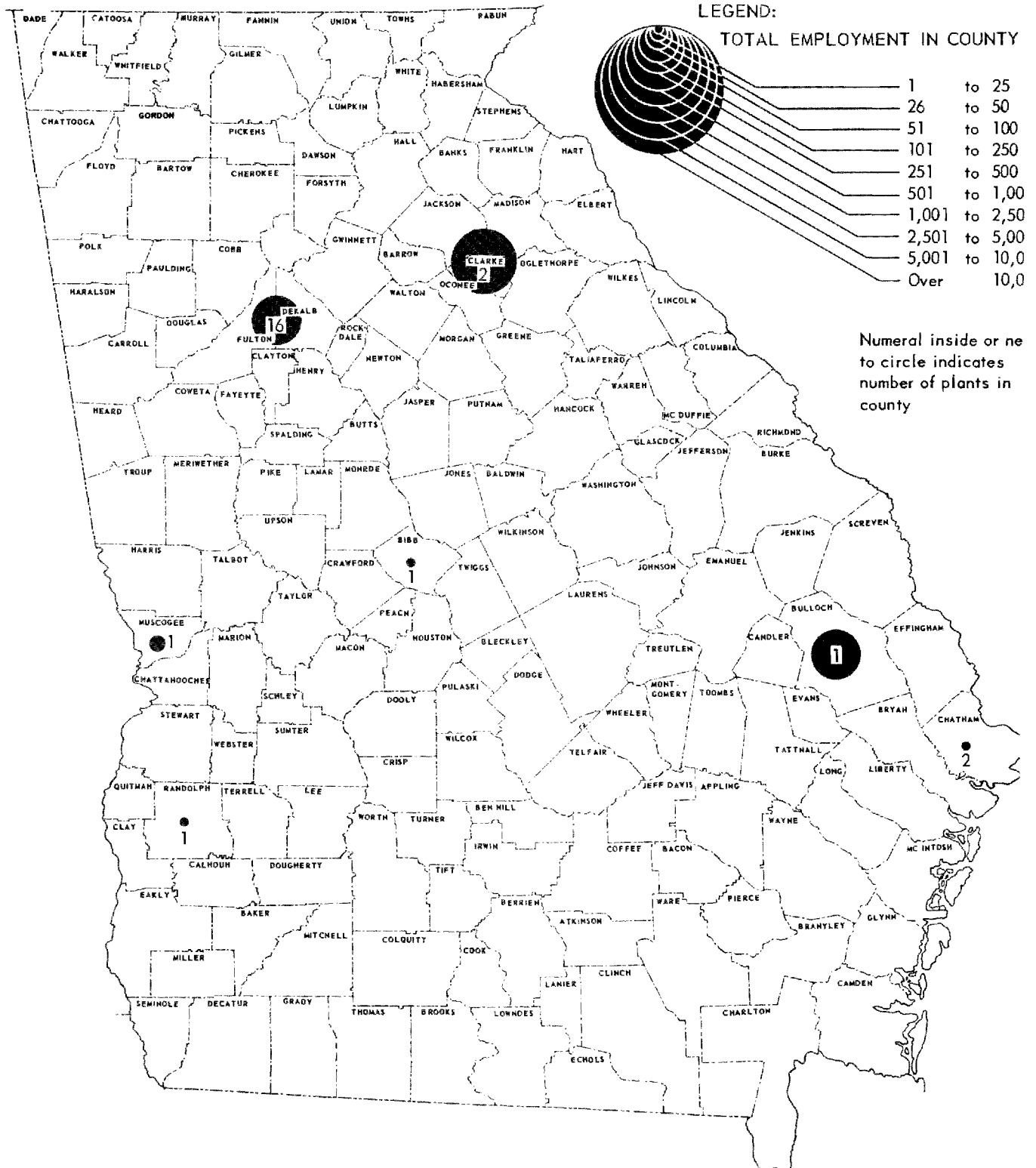
Upholstered wood furniture plants are generally larger than the other furniture manufacturers. Only eight of the 24 plants fall into the smallest

category (one to 25 employees). Nine plants, however, employ 50 or more, and four of these have more than 100 employees.

Floyd, Wayne and Habersham counties, respectively, have the largest upholstered furniture plants in Georgia. Fulton County, however, leads the State in number of firms (eight), although it has less total employment (under 300) than either Floyd or Wayne. The remaining upholstered furniture plants are in Carroll, Catoosa, Dade, Emanuel, Harris, Henry, Lowndes, Morgan, Muscogee, Polk, Sumter and Talbot counties.

Georgia's largest household furniture manufacturers, ranked by size, are Southern Spring Bed Company, Atlanta (mattresses, box springs and other furniture); Simmons Company, Atlanta (mattresses, box springs and upholstered furniture); Production Engineering Company, Austell (metal furniture); Toccoa Manufacturing Company, Toccoa (wood furniture); Fox Manufacturing Company, Rome (upholstered furniture); Waynline, Inc., Jesup (upholstered furniture); and Art Furniture Manufacturing Company, Macon (wood furniture). Combined employment in these seven plants accounts for 45% of the workers engaged in the manufacture of household furniture in Georgia.

MAP 10 INSTRUMENTS AND RELATED PRODUCTS



INSTRUMENTS AND RELATED PRODUCTS

Only one other major industry group (petroleum products) ranks lower than instruments in total number of plants and employment. Twenty-four plants in eight counties employ slightly more than 1,300 workers, with more than 95% of total employment concentrated in three areas: Athens, Atlanta and Statesboro.

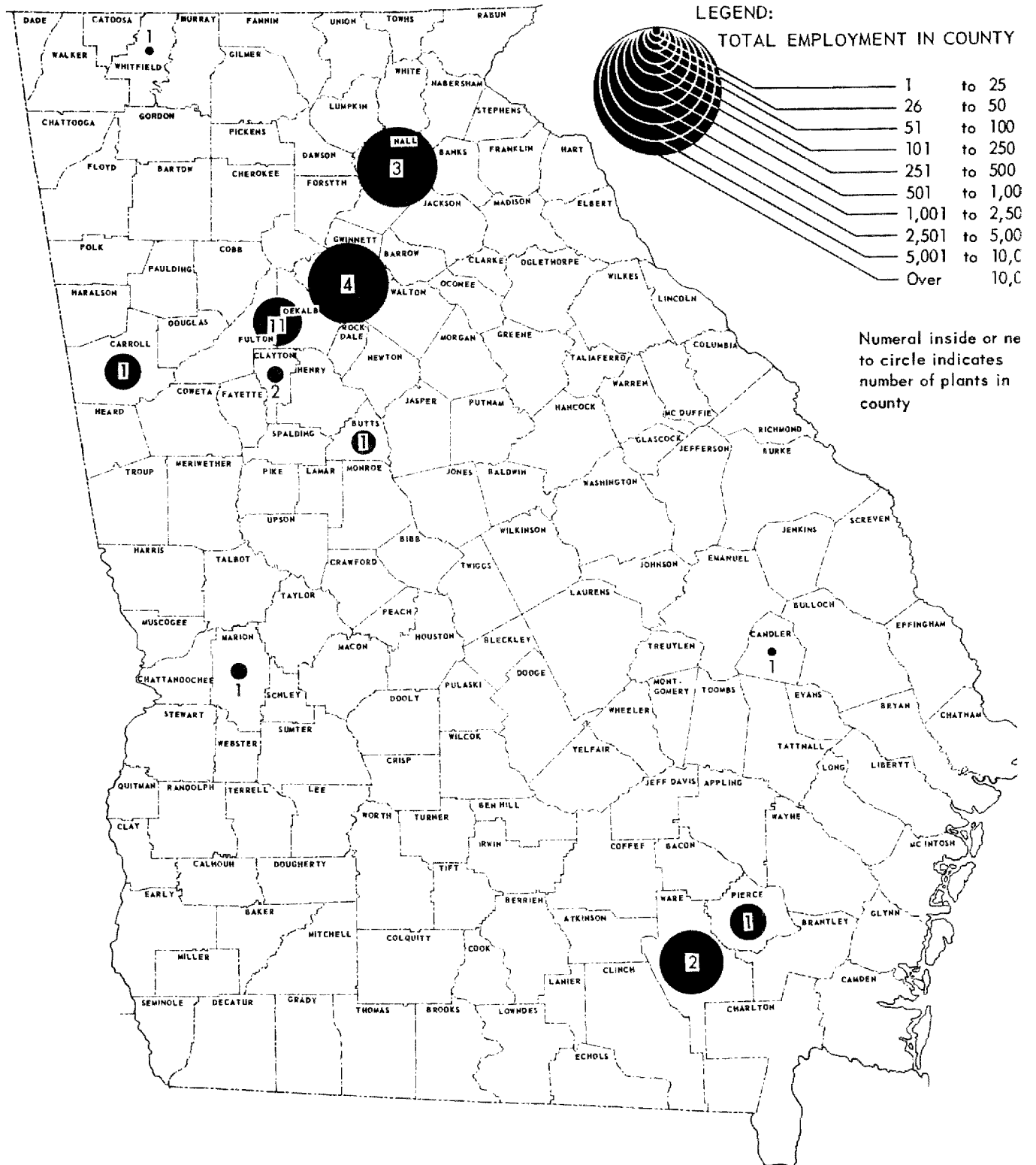
While the amount of activity in this major classification, as measured by employment and number of plants, is limited when compared to other major groups, the product lines are well diversified. Scientific and mechanical measuring instruments; surgical instruments, appliances and supplies; dental equipment and supplies; ophthalmic goods; photographic equipment and supplies; and clocks and radio timers are examples of the product lines manufactured in the State.

The Atlanta area is the most diversified, with all product lines but clocks and radio timers represented. However, only one product line -- surgical instruments, appliances and supplies -- is represented in the other three metropolitan areas involved (Columbus, Macon and Savannah). In the remaining three counties, the products are limited to clocks and radio timers in Clarke, mechanical measuring devices in Bulloch, and photographic equipment in Randolph.

Excepting the three largest operations, all plants in this major group are small, employing fewer than 50 workers each.

The State's three largest instrument manufacturers, each employing more than 100 workers, are Eastman Kodak Company, Chamblee (film processing); General Time Corporation, Athens (clocks and radio timers); and Rockwell Manufacturing Company, Statesboro (gas and petroleum meters and taxi meters).

MAP 11 LEATHER AND LEATHER PRODUCTS



LEATHER AND LEATHER PRODUCTS

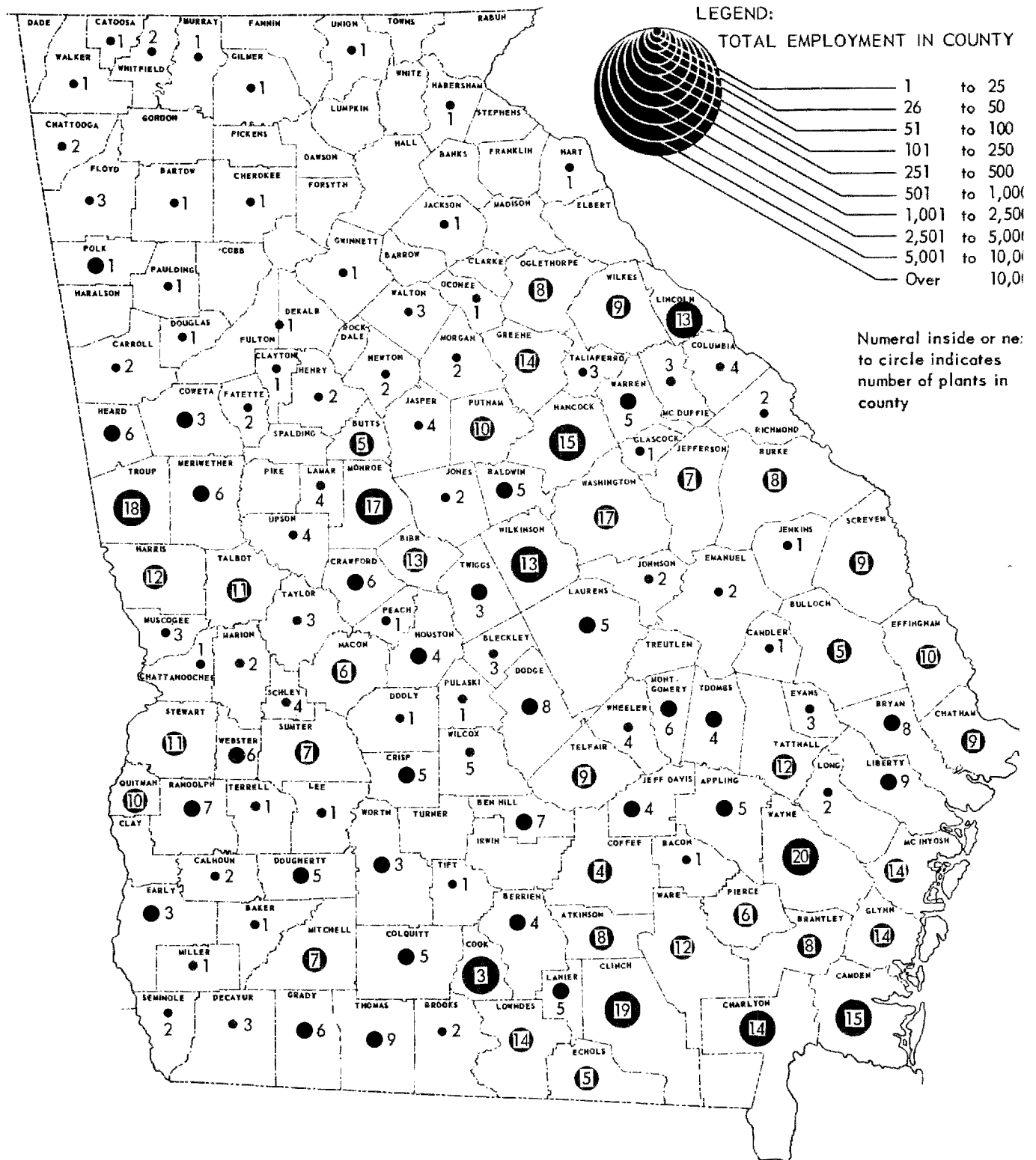
Leather products rank sixteenth among the major industry groups, with 27 plants employing over 3,650 workers or slightly less than 1% of all manufacturing workers in Georgia. Excepting the Atlanta area, all of the leather operations are located in towns of medium to small size. Three counties with a total of nine plants (Gwinnett with four, Hall with three and Ware with two) account for 74% of all leather employment. Moreover, 90% of all workers are employed in the 20 plants found in six counties -- Fulton-DeKalb, Gwinnett, Hall, Pierce and Ware.

Shoes rank as the leather industry's most important product, with 11 plants employing slightly over 75% of the workers. Saddles and harness rank second with 10% of the employed, followed by the tanning and finishing operations, with 9% of the workers. The remaining employment is engaged in the production of luggage, handbags and personal items and industrial belting and packing.

Shoe operations are found in Candler, Carroll, Fulton-DeKalb, Gwinnett, Hall, Pierce, Ware and Whitfield counties. All of the tanning and finishing operations are concentrated in Gwinnett and Hall counties. Likewise, nearly all of the saddle and harness manufacture is concentrated in these two counties with the exception being the limited activity in the Fulton-DeKalb area. Firms engaged in the manufacture of luggage, handbags and other personal items are found in Butts, Clayton and Fulton-DeKalb counties, while all of the industrial belting and packing operations are found only in the Fulton-DeKalb area.

The State's six largest leather plants each employ over 250 workers. Ranked by size, they are Georgia Shoe Manufacturing Company, Flowery Branch (shoes); Genesco, Inc., Lawrenceville (shoes); Rubin Brothers Footwear, Waycross (shoes); S. C. Spatola Footwear, Waycross (shoes); Bona Allen, Inc., Buford (tanning); and Bona Allen, Inc., Buford (saddles and harness).

MAP 12-A LOGGING OPERATIONS



LUMBER AND WOOD PRODUCTS

The manufacture of lumber and wood products is Georgia's fourth ranking industry with over 30,000 employed in 1,702 establishments.

This industry, like the textile industry, has experienced a continual decline in employment over the years. Georgia's standing relative to the nation has also been on the decline. In 1947, Georgia had 5.3% of the nation's workers; by 1954, the percentage had dropped to 5.0; and in 1958 it was down to 4.6.

Several reasons appear to be responsible for the decline of the lumber and wood products industry in Georgia. Automation has displaced some workers. The expansion of pulp and paper manufacturing in the State is tightening the supply of timber for lumber manufacture. Competition from the western lumber industry and increased uses of other types of building materials are other factors influencing this downward trend.

For analysis purposes the industry is presented in three parts -- logging operations, sawmills and planing mills, and all other operations. The last includes millwork, veneer and plywood, hardwood flooring, fabricated wood products, wooden containers and wood preserving.

Logging Operations

Logging operations primarily engaged in cutting timber and producing raw materials are even more numerous than shown by the accompanying map, since many small operators are not covered by unemployment compensation. Also, this map does not pinpoint most of the large logging operations, since these are found in combination with sawmills or other lumber-converting establishments.

This means that the map, while of some interest and value to many readers, has limitations imposed by the problem of definition. Nevertheless, logging camps represent 42% of the operations, but only 18% of the employment in the lumber and wood products industry of the State. When this survey was made Georgia had 713 logging operations employing a total of 5,316 persons.^{1/}

^{1/} Georgia Department of Labor, Second Quarter 1960 Summary Data (unpublished). Data represent only those firms covered by the Georgia Employment Security Law, which generally includes only those firms with four (4) or more employees.

Logging operations are found in 132 of the 159 counties in Georgia. Of the 27 counties without logging camps, all but one (Rockdale) have one or more sawmills. The greatest concentration of counties having no logging operations is found in the northeast corner of the State, where there is a greater density of hardwoods and lesser amounts of timber (mostly pine) suitable for pulpwood. Clay, Irwin, Treutlen and Turner are the only south Georgia counties without logging camps.

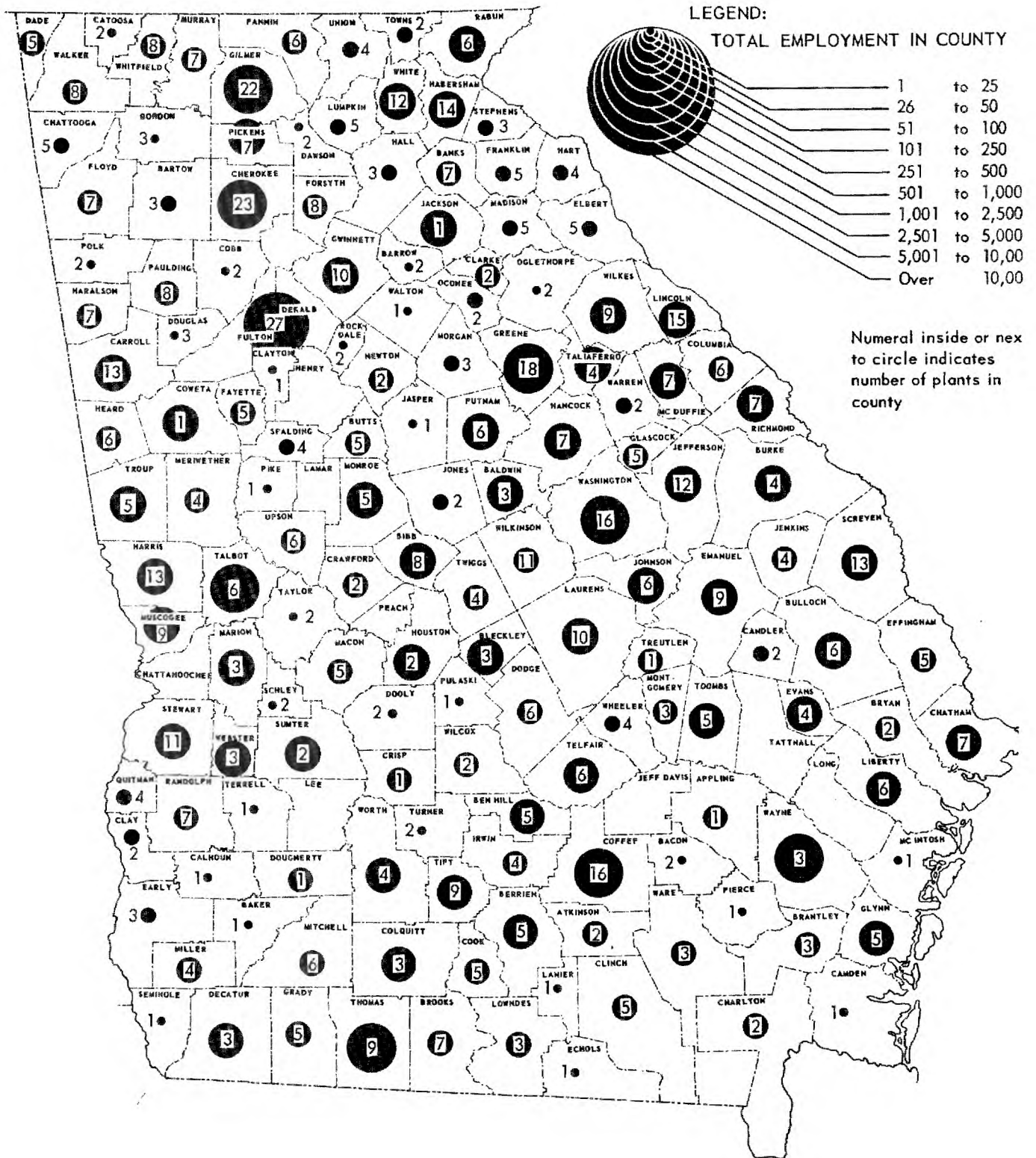
Only 10 counties in the State have more than 100 persons employed in logging operations. They are Camden, Charlton, Clinch, Cook, Hancock, Lincoln, Monroe, Troup, Wayne and Wilkinson. Wayne County has the greatest number of camps (20) but Lincoln County has the largest employment (almost 200).

Logging camps are small operations, with the average camp employing between seven and eight persons. Almost all (705) of the operations in Georgia employ fewer than 26 workers, and 562 (79%) have fewer than 10 workers. Only two operations employ 100 or more.

Cherokee Chips, Inc., (Cook County), Hercules Powder Company (Echols County), and W. T. Dunaway (Lincoln County) operate the largest logging camps in the State.



MAP 12-B SAWMILLS



LUMBER AND WOOD PRODUCTS

Sawmills

The sawing of rough lumber is Georgia's second most ubiquitous industry. Some 794 operations employ over 13,900 workers and account for 46% of all establishments and 45% of the employment in the lumber and wood industry.

Only eight counties (Chattahoochee, Jeff Davis, Henry, Lamar, Lee, Long, Peach and Tattnall) are devoid of sawmills.

However, it might be emphasized again that the map shows only those establishments employing four or more workers.^{1/} The numerous small operations are therefore excluded. The problem of definition also presents limitations. Plants in other categories often carry on these operations to make components of their end products or secondary lines, as well as in combination with logging operations, as indicated previously. Each of the above counties has one or more logging operations and in Tattnall alone 12 camps employ a total of 91 workers. Likewise, Henry, Jeff Davis, Peach and Tattnall counties have plants in other categories.

Though somewhat larger than logging camps, sawmills, too, are small operations. The average sawmill in Georgia employs 17 workers. Over 83% of the mills employ fewer than 26 workers and nearly 43% employ fewer than 10 each. However, 49 mills employ over 50 workers; six of these have a work force that exceeds 100 employees.

Georgia has 55 counties in which total employment in sawmills exceeds 100. In 15 of these the work force exceeds 200. The Fulton-DeKalb area has the largest work force, with 567 employed in 27 mills. Wayne, Gilmer and Coffee, respectively, have the next highest number of employees, with total employment exceeding 300 in each county.

Georgia's largest sawmills are operated by Justice Brothers Lumber Company (Coffee County), Mose Gordon Lumber Company (Jackson County), Pioneer Products Company, Inc. (Wayne County), Reynolds & Manley Lumber Company

^{1/} Georgia Department of Labor, Second Quarter 1960 Summary Data (unpublished). Data represent only those firms covered by the Georgia Employment Security Law, which generally includes only those firms with four (4) or more employees.

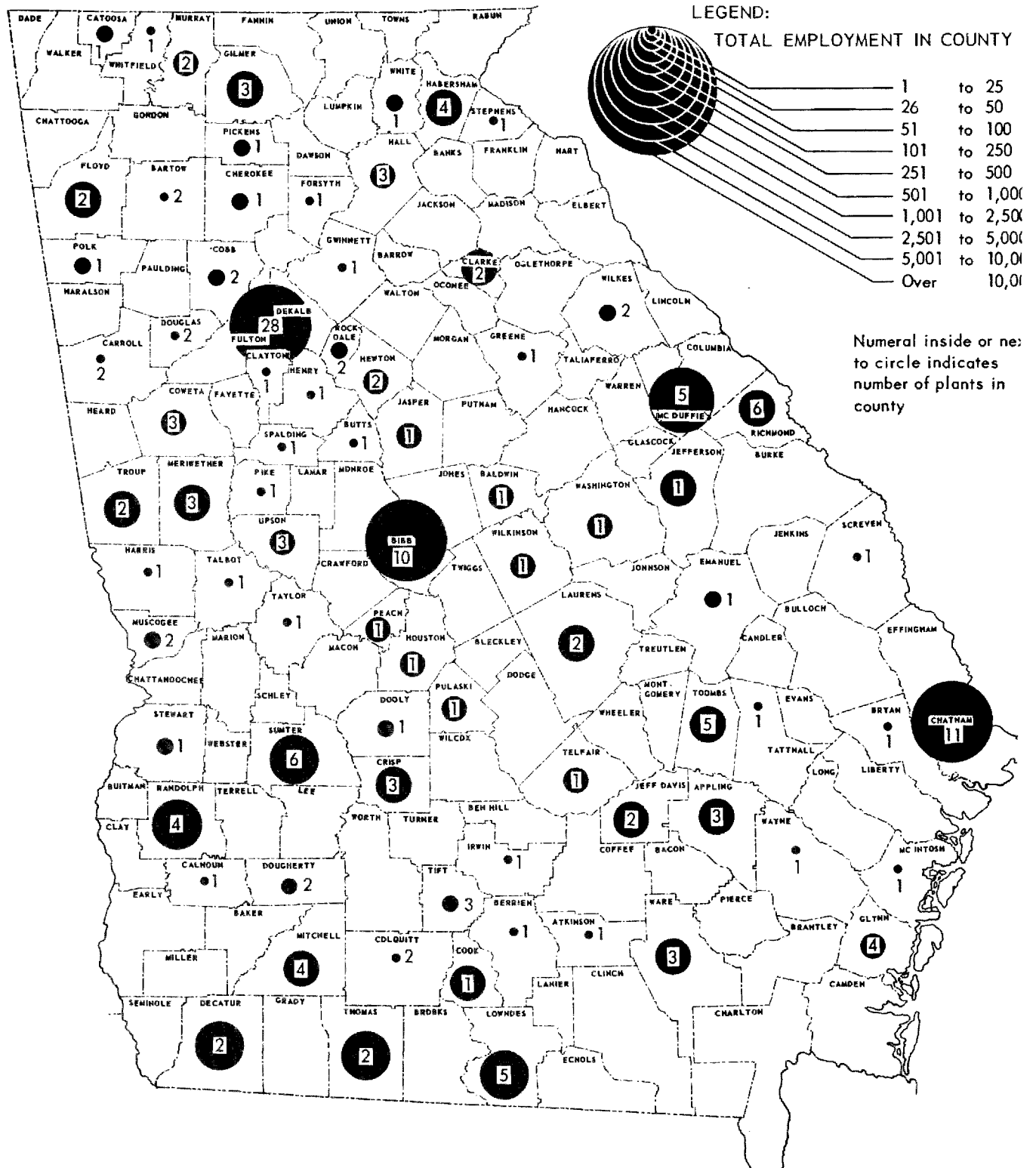
(Chatham County), Tolleson Lumber Company, Inc. (Houston County), and Union Lumber Company, Inc. (Fulton County).

Mills producing special products such as excelsior, cooperage stock (barrel staves), furniture frames and snow ski blanks are also shown on Map 12-B. There are seven of these mills in Georgia. Three mills, located in Fulton, Glynn and Talbot counties, manufacture excelsior. Cooperage stock is produced in two mills located in Gilmer and Rabun counties. Of the two remaining mills, one produces furniture frames in Early County and the other, located in Bibb County, makes ski blanks. The largest of these mills, employing over 100 workers, is Georgia Cushion and Wrapper Company in Talbot County, which produces excelsior, wood wool and excelsior pads, and wood wool stitch pads for baby chick shipping cartons. The remaining mills are small, each employing fewer than 30 workers.



MAP 12-C

MILLWORK, PLYWOOD AND OTHER ASSOCIATED PRODUCTS



LUMBER AND WOOD PRODUCTS

Millwork, Plywood and Other Associated Products

Georgia has 195 plants employing over 11,000 in its remaining lumber and wood products industries. Millwork, plywood, veneer, wooden containers, prefabricated structures, hardwood flooring, wood preserving and miscellaneous products (such as wooden handles, pallets, picture frames and chicken coops) are the types of goods produced in these plants.

Geographically, the plants are well dispersed over the State, with 80 of Georgia's 159 counties having one or more operations. On an employment basis, however, nearly 60% of all workers are concentrated in only 10 counties -- Bibb, Chatham, Decatur, DeKalb, Fulton, Lowndes, McDuffie, Randolph, Sumter and Thomas. Moreover, 44% work in just five counties -- Bibb, Chatham, DeKalb, Fulton and McDuffie.

Statewide, on a product basis, wooden containers, veneer and plywood, millwork and wood preserving are the most significant lines, accounting for over 80% of all employment. The 35 wooden container plants employ a total of 3,700 workers, two-thirds of which are engaged in the production of wire-bound boxes and crates. Veneer and plywood are manufactured in 21 mills which employ nearly 2,200. Millwork plants are the most numerous of these operations (56), but their total employment numbers only 1,750. Wood preserving operations provide jobs for 1,260 in 26 plants. Of the remaining product lines, 700 are employed in the 11 hardwood flooring mills, 530 in the eight plants producing prefabricated structures, and over 900 in the 38 plants manufacturing miscellaneous wood products.

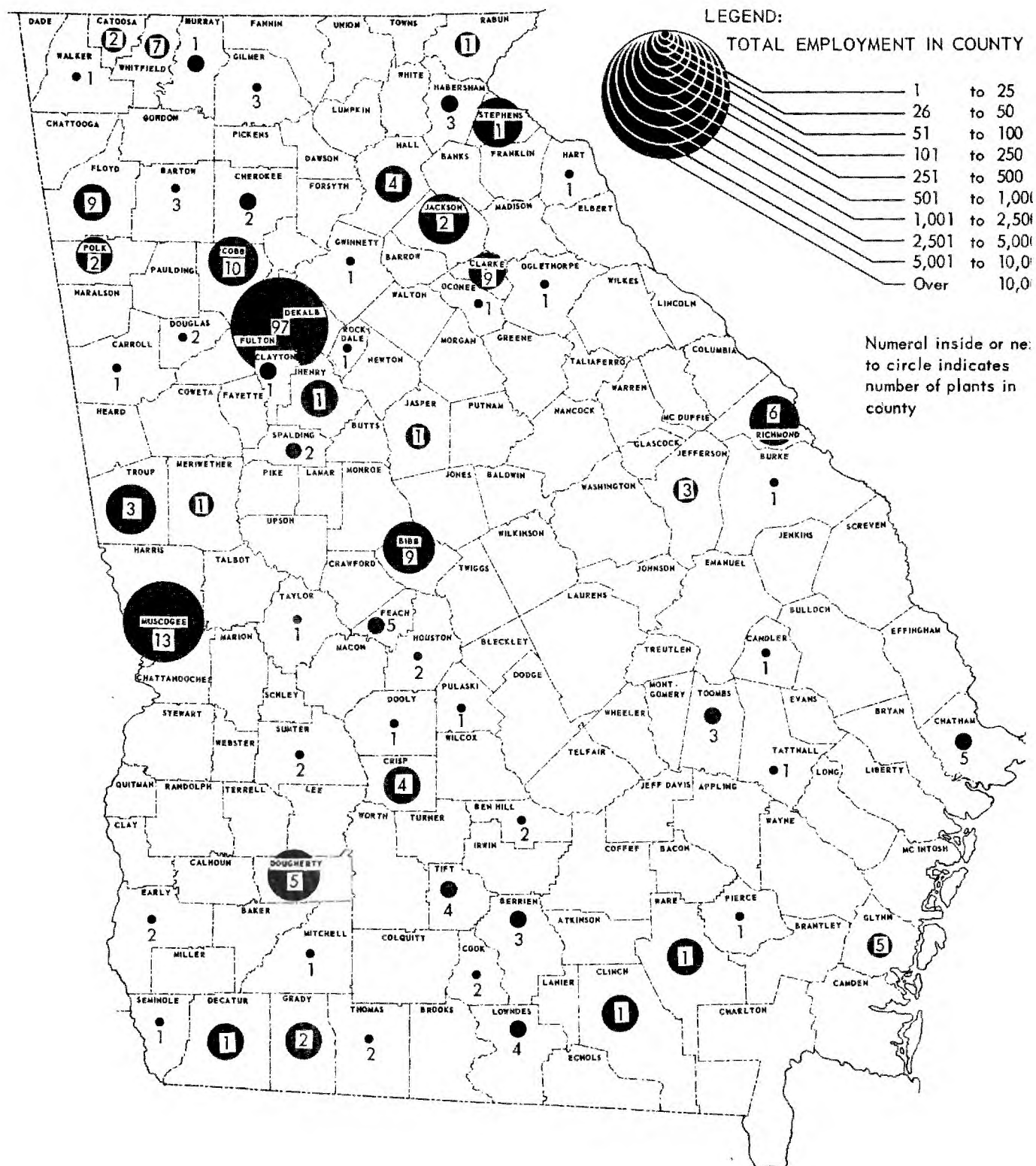
Over two-thirds of Bibb County's workers in this manufacturing classification are employed in the manufacture of wirebound boxes and crates. Another 8.4%, 6.3% and 5.3%, respectively, are engaged in millwork plants, wood preserving and hardwood flooring mills. Half of Chatham County's employment in this category is in the production of veneer and plywood, and nearly one-third is in the manufacture of wirebound boxes and crates. In the Fulton-DeKalb area millwork accounts for 43%, wood preserving 24% and hardwood flooring mills 14% of the workers. Prefabricated buildings and nailed boxes are the most significant products in McDuffie County, accounting for 60% and 30% of total employment in this category. In Lowndes County,

wood preserving and veneer and plywood production account for 94% of the workers. The manufacture of wirebound boxes and crates accounts for 94% and 99% of the workers in Thomas and Decatur counties, respectively. Three-fourths of the workers in Sumter County are engaged in the production of veneer and plywood containers. In Randolph County, the manufacture of veneer and plywood accounts for 61% of employment, and wirebound boxes and crates about 32% of employment in this manufacturing classification.

The largest firms producing millwork, plywood and other associated products are Atlanta Oak Flooring Company, Atlanta (hardwood flooring); Dayton Veneer & Lumber Mills, Americus (veneer and plywood containers); Georgia Art Supply Company, Inc., Atlanta (picture frames); Georgia Pacific Company, Savannah (veneer and plywood); Knox Homes Corporation, Thomson (prefabricated houses); The Langdale Company, Valdosta (wood preserving); Maxwell Brothers, Inc., Macon (wirebound boxes and crates); McNeill, Lauff & McNeill Box Factory, Thomson (nailed wood boxes); Randall Brothers Lumber Company, Atlanta (millwork); and Southern Lumber & Manufacturing Company, Ellijay (wood pallets).



MAP 13
MACHINERY, EXCEPT ELECTRICAL



MACHINERY, EXCEPT ELECTRICAL

The machinery industry group includes establishments engaged in manufacturing machinery other than electrical equipment and transportation equipment. In Georgia the machinery industry includes the manufacture of more than 30 different kinds of machinery and equipment.

Since 1939 this industry has remained small relative to other major industry groups in the State. In 1958 this group ranked eleventh, the same as in 1939, even though some 7,000 workers had been added to the total work force and more than 200 new plants had begun operations in Georgia over the 20-year period. This growth, while not spectacular, has been at a slightly greater rate than that of the nation. However, Georgia is still decidedly a "have-not" state as far as this general group of industries is concerned. Today, fewer than 10,000 persons are employed in the 269 plants in this classification.

The Fulton-DeKalb area and Muscogee and Stephens counties are the major centers of machinery equipment and parts production in Georgia. The Fulton-DeKalb area alone accounts for 36% of the plants and employment, with more than 3,400 employed in 97 plants representing a wide range of machinery and parts. All of Georgia's elevators, conveyors, metalworking machinery, paper industry machinery, printing trades machinery and equipment, industrial patterns, mechanical power transmission equipment, scales, office machines, dry cleaning equipment and industrial vacuum cleaners are manufactured in the Fulton-DeKalb area. Other product lines represented in the area are farm machinery, machine tools and special dies and tools, food products machinery, textile machinery, woodworking machinery, pumps and compressors, fans and blowers, air conditioners and commercial and industrial refrigerators, service industry machinery and machine shops.

Over 1,100 are employed in Muscogee's 13 plants. Six of these manufacture textile machinery; five are machine shops. Of the two remaining plants, one makes farm machinery and the other pumps and compressors.

Stephens County has only one plant in the machinery group -- Le Tourneau-Westinghouse Company, Georgia's leading manufacturer of construction machinery.

On a product basis, three lines -- farm machinery, textile machinery, and machine shops -- account for half of the industry's employment and

slightly more than half of the plants. Separate maps depict each of these product lines.

Map 13 presents the State's total machinery picture. Construction machinery, mining machinery, farm machinery, metalworking machinery, special industry machinery, general industrial machinery, office and service industry machines and machine shops are the major product lines represented in Georgia. This map includes farm machinery, textile machinery and machine shops which are also analyzed separately.

The manufacture of construction machinery, mining machinery and industrial trucks represents only a small part of the machinery complex in Georgia. This group -- numbering 10 plants -- employs less than 700 workers. Four plants manufacture construction machinery in Glynn, Lowndes, Stephens and Taylor counties. Two plants, located in Bartow and Floyd counties, produce mining machinery. Industrial trucks are manufactured in four plants in Chatham, Floyd, Hart and Richmond counties.

Metalworking machinery and equipment, such as machine cutting and forming tools and special dies and tools, is produced in 28 plants employing 800 workers. Seventeen of these are located in Cobb and Fulton counties and account for nearly half of all employment. The remaining plants are located in Bibb, Catoosa, Crisp, DeKalb, Floyd, Glynn, Oglethorpe, Richmond, Rockdale and Toombs counties.

Excluding textile machinery, the special industry machinery plants number 37 and employ 1,200 workers. This group includes the manufacture of food products machinery, paper industry machinery, woodworking machinery, and printing trades machinery and equipment. The plants involved are located in Bartow, Bibb, Clarke, Cook, Decatur, DeKalb, Floyd, Fulton, Glynn, Gwinnett, Hall, Jefferson, Richmond and Thomas counties. Fulton County has 13 of these operations with total employment exceeding 500.

Included in general industrial machinery are pumps and compressors, fans and blowers, industrial patterns, and mechanical power transmission machinery. Of the 17 plants in this group, Fulton County has eight of the plants and 250 of the 800 employees. The remaining nine plants are located in DeKalb, Dooly, Jackson, Muscogee, Peach, Richmond and Whitfield counties.

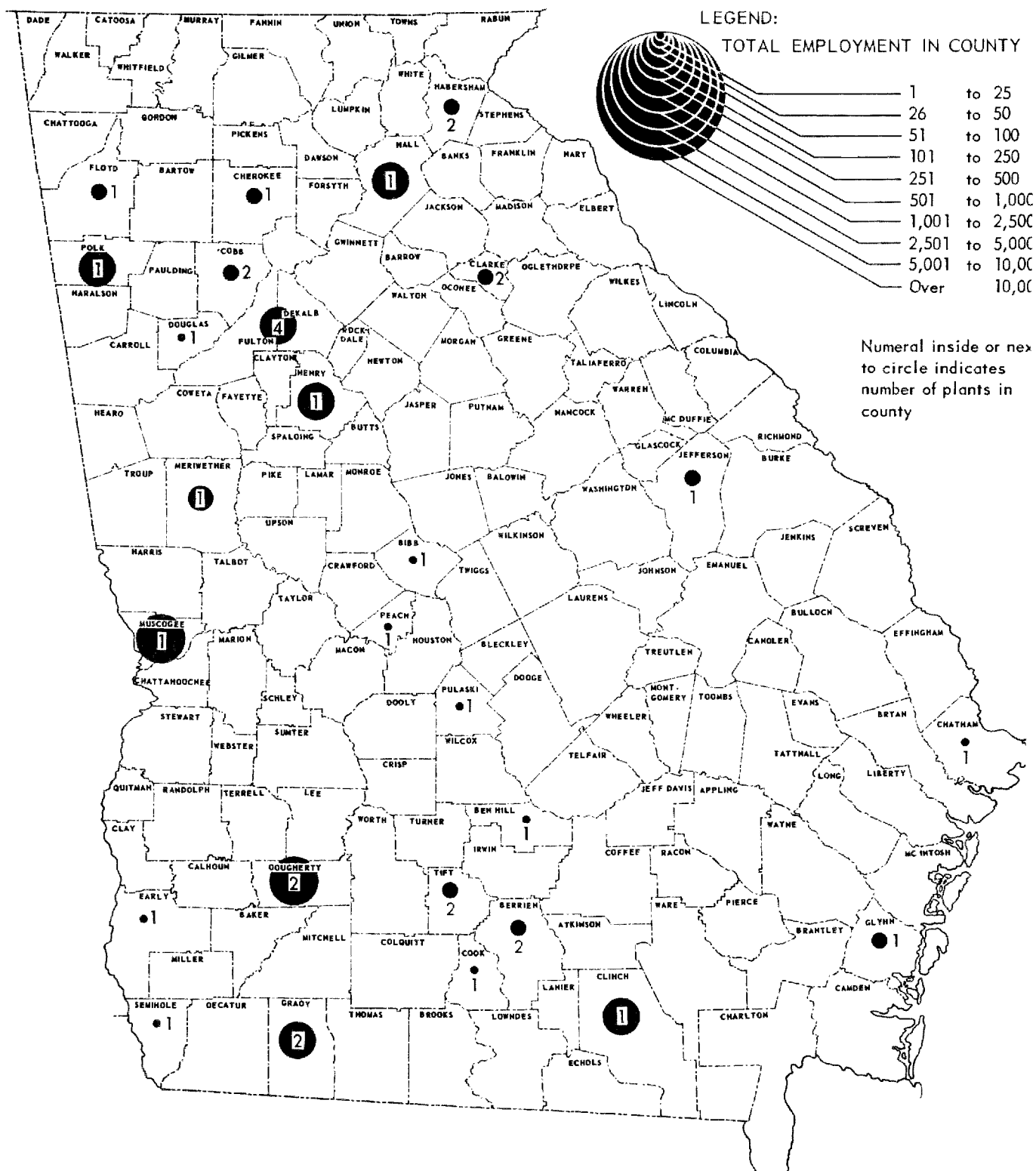
Office and service industry machines are manufactured in 20 plants which employ over 1,000 workers. These plants are found in Clarke, Clayton, Crisp,

DeKalb, Douglas, Fulton and Lowndes counties. Fulton County has 14 of these plants and over 900 of the employees.

Among the larger firms in that segment of the machinery industry discussed above are Le Tourneau-Westinghouse Company, Toccoa (construction machinery); The Warren Company, Inc., Atlanta (commercial refrigeration); and Roper Hydraulics, Inc., Commerce (rotary pumps).

The distribution of employment and plants engaged in farm machinery, textile machinery and machine shop operations is shown in Maps 13-A, 13-B and 13-C. Because of definition, these maps have certain limitations which should be noted. In separating these operations from the total industry group, it was recognized that many plants in the machinery group produce a variety of products in combination with their principal line. For example, many plants producing special and general industrial equipment and parts may also provide machine shop services or manufacture farm and textile equipment. Machine shops may also produce a variety of special and general industrial equipment and parts, such as farm equipment, textile parts, food products machinery, and machine tools. A few of the plants producing farm equipment also produce road machinery and transportation equipment. Some of the plants in the textile machinery classification also gin cotton, produce transportation equipment, and manufacture die castings. To avoid duplicate listings, plant identification has been based on the primary or most significant product line. The maps which follow, therefore, include only those plants which are primarily engaged in the manufacture of farm machinery and textile machinery and in machine shop operations.

MAP 13-A
FARM MACHINERY



MACHINERY, EXCEPT ELECTRICAL

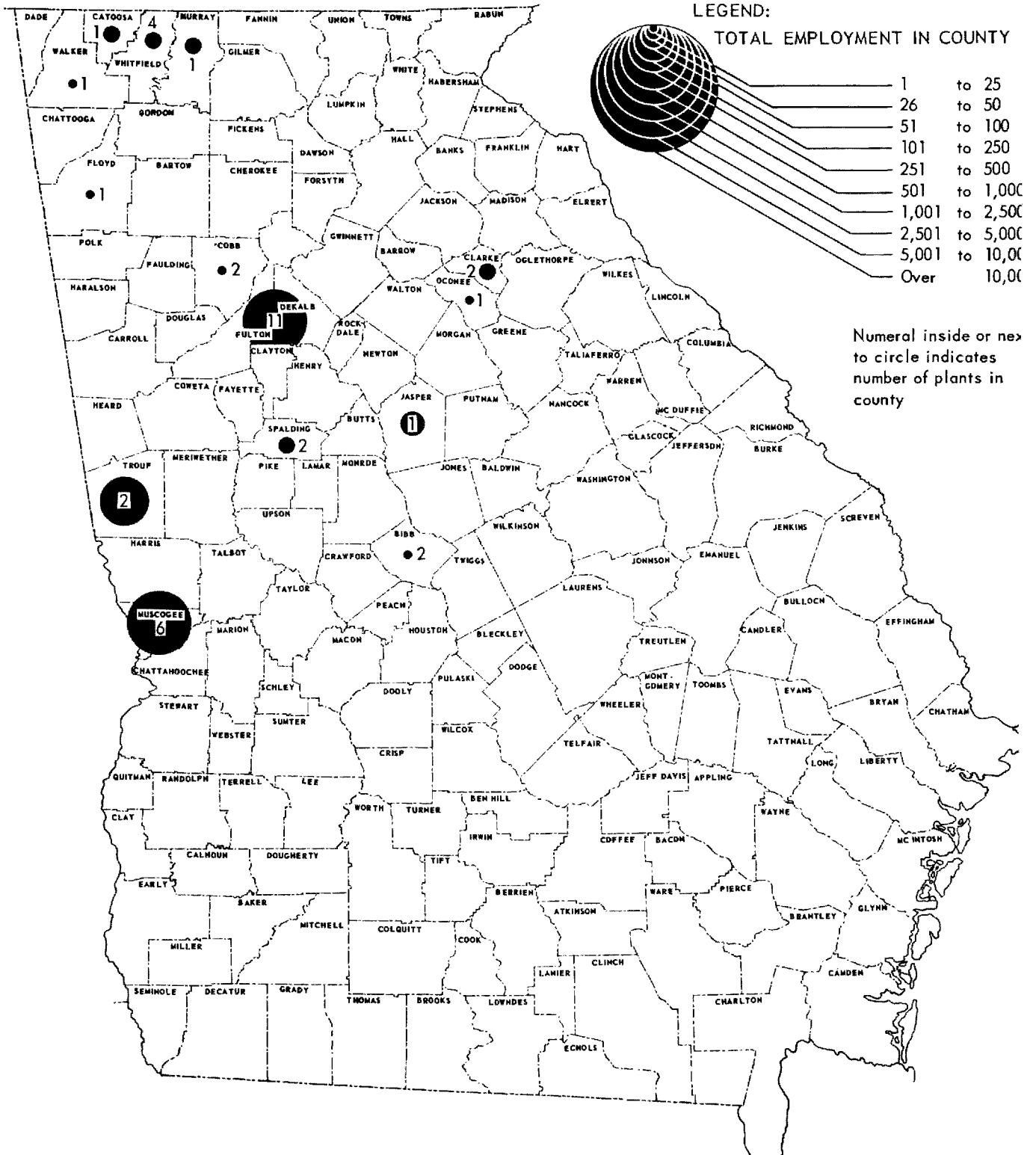
Farm Machinery

Farm machinery is manufactured in 37 plants, with one or more operations in 28 counties. Muscogee, Dougherty and Clinch counties have more than 800 of the industry's 2,100 employees.

Crop dusters and sprayers, disc harrows, liquid fertilizer applicators, forestry and nursery equipment, poultry equipment, garden tractors, power mowers and mowing equipment, feed mills, tree planters, subsoilers, sawmill and logging equipment, fruit packing equipment, land clearing machinery, fertilizer machinery, plows, peanut harvesting and processing equipment, and pecan tree-shakers and shelling machinery are examples of the wide variety of farm machinery and equipment manufactured in Georgia.

For the most part these plants are small operations; 27 employ fewer than 50 workers each and 17 of these employ fewer than 15 workers. Eight plants, however, employ more than 100 workers. The largest farm implement manufacturers in Georgia are Columbus Iron Works Company (Columbus), Harrison & Ellis, Inc. (Cairo), Lilliston Implement Company (Albany), Rome Plow Company (Cedartown), and Standard Container Corporation (Homerville).

MAP 13-B TEXTILE MACHINERY



MACHINERY, EXCEPT ELECTRICAL

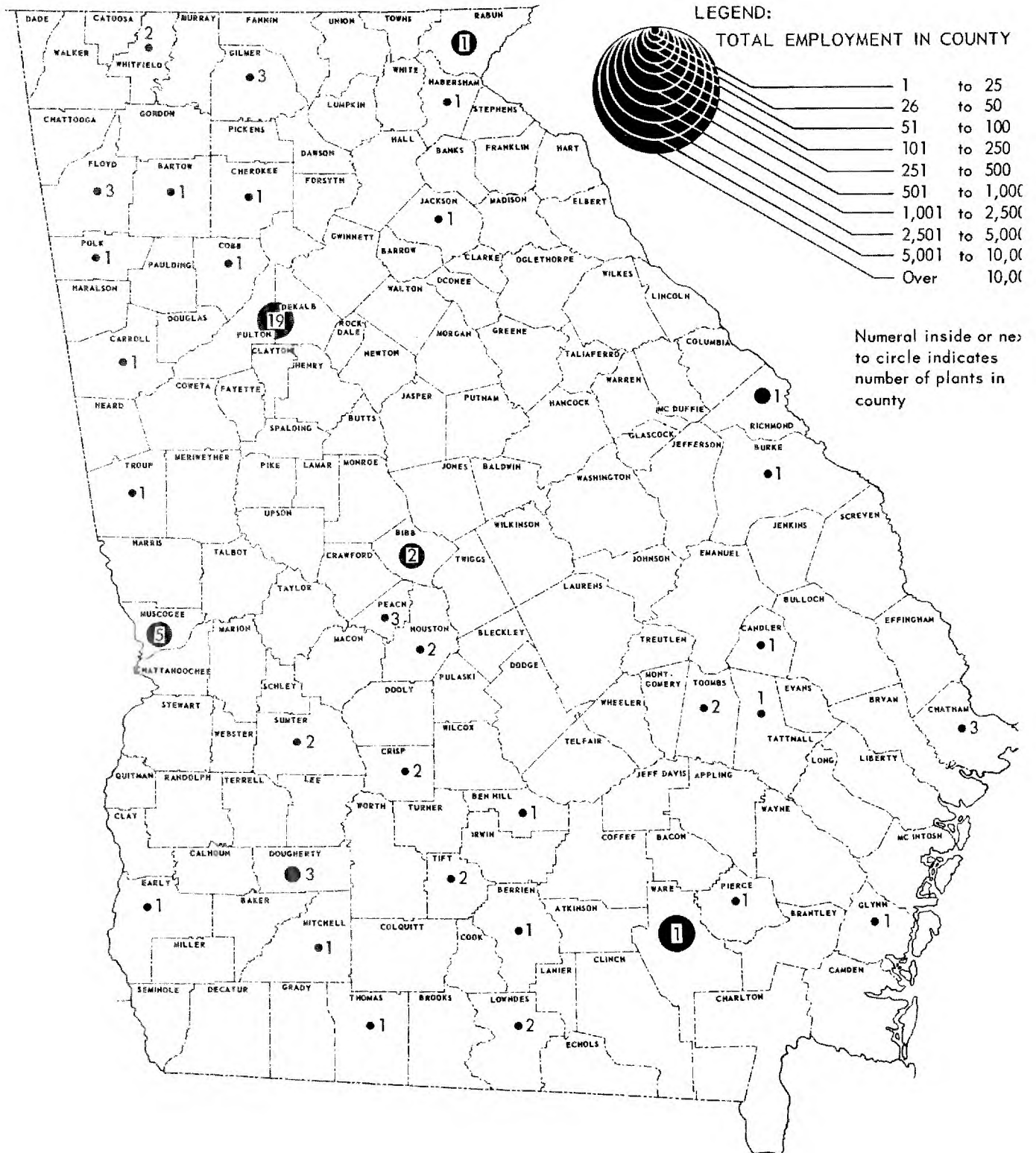
Textile Machinery

Almost 1,800 workers are engaged in the production and rebuilding of textile machinery and parts in Georgia. In general, the 37 operations are found in the major textile producing centers of the State, with one or more plants located in 15 counties. Muscogee, Fulton and Troup account for half of the plants (19) and more than 1,400 of the industry's workers.

Tufting machines and parts, knitting machines and parts, twisting machines and parts, heddles and reeds for looms, chenille machines, card clothing, textile mill rolls, bobbins and quills, rings, cotton condensers and cotton openers and pickers are some of the more important machines and parts manufactured and rebuilt in Georgia.

As has already been mentioned, many companies manufacture a variety of machinery and parts. Those shown on the accompanying map represent companies whose primary or principal product is in the textile line. Most of these plants are small; 30 employ fewer than 26 workers and only five employ 100 or more. The State's largest plants in this group are Cen-Tennial Cotton Gin Company (Columbus), Lummus Cotton Gin Company (Columbus), Meadows Manufacturing Company (Atlanta), Pioneer Heddle & Reed Company, Inc. (Atlanta), and West Point Foundry & Machine Company (West Point).

MAP 13-C MACHINE SHOPS



MACHINERY, EXCEPT ELECTRICAL

Machine Shops

Machine shops are defined as "establishments primarily engaged in producing or repairing machine and equipment parts not elsewhere classified, on a job or order basis for others. These shops may use their own materials or may perform machining operations on material owned by others and are equipped with machine tools and other power driven metalworking machinery capable of manufacturing a wide range of machine and equipment parts."^{1/}

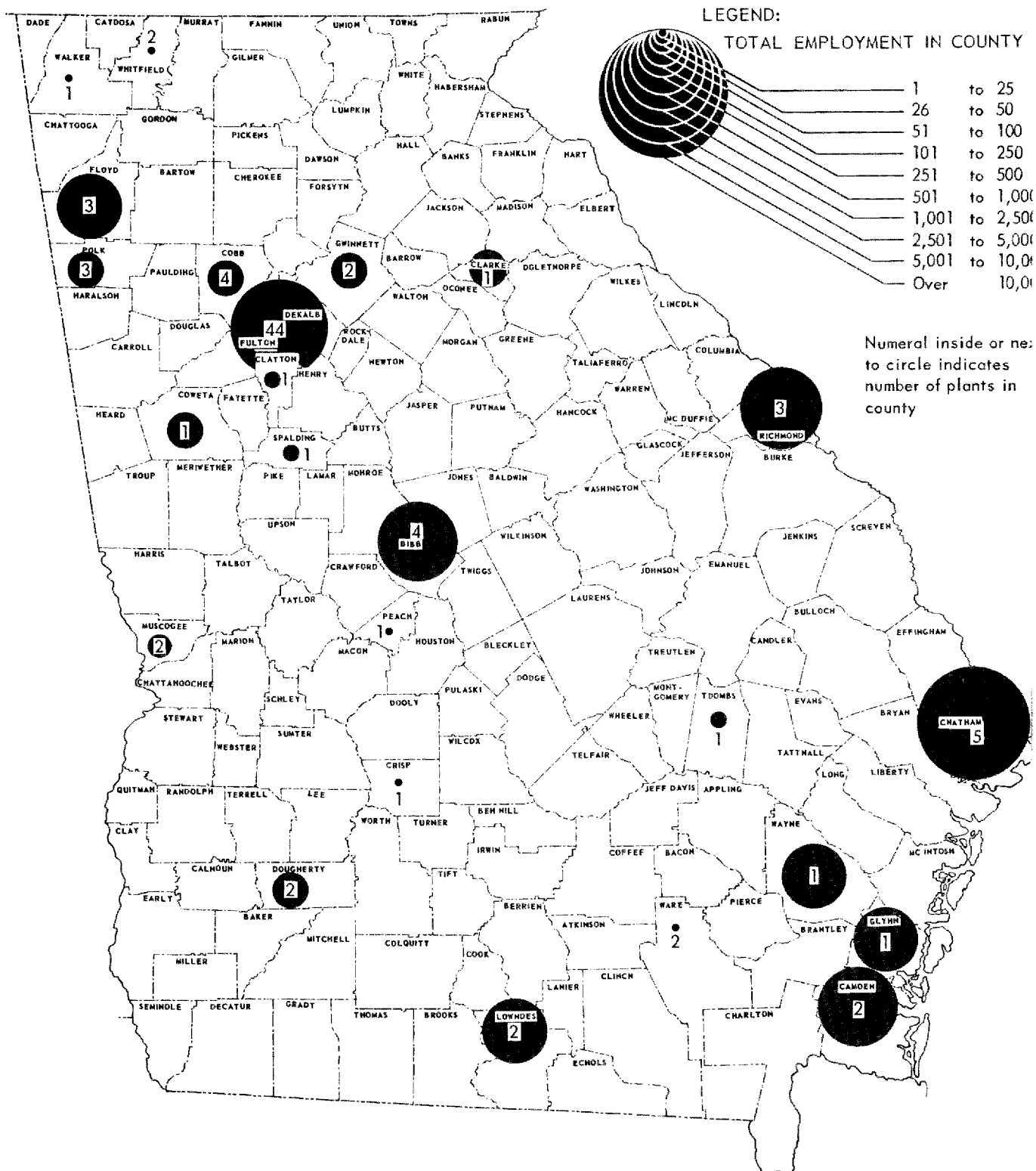
Within Georgia's machinery industry, machine shops employing around 900 workers constitute the largest single group of plants (28%). Map 13-C includes 76 machine shops, the largest of which employs over 200 workers. They are scattered widely in 37 counties, although the Fulton-DeKalb area has one-fourth of the total (19). Except in the east-central area, industrialists can obtain services in practically any section of the State.

Machine shops are the smallest manufacturing operations in the State. Average employment in the 69 shops employing from one to 25 workers is only six workers. Logging camps, the State's second smallest operations, average seven workers for the same employment category. Only three shops in Georgia employ more than 50 workers. They are the Aid Corporation of Clayton, Macon Machine Shop, Inc., of Macon, and Waycross Machine Shop of Waycross.

^{1/} Standard Industrial Classification Manual, Bureau of the Budget, Washington, D. C., 1957.

MAP 14

PAPER AND ALLIED PRODUCTS



PAPER AND ALLIED PRODUCTS

Paper and paper products are a major export of Georgia -- particularly kraft paper, paperboard and paperboard containers.

In total employment this major group ranks sixth in Georgia with almost 19,500 employed in 90 plants. Chatham County is the center of the industry, accounting for nearly one-third of the industry's employment. The Fulton-DeKalb area is second in total employment with about 5,000 workers. These two centers are quite different in products manufactured, however. In the Fulton-DeKalb area some 44 plants produce a wide variety of converted paper and paperboard products, whereas in Chatham a paper mill and a paperboard mill account for almost all of the employment.

Because of their importance to Georgia's paper industry, the pulp, paper and paperboard mills are identified on a separate map (Map 14-A). The remaining paper products are shown on the accompanying map, "Paper and Allied Products," which also includes the mills.

Paper coating and glazing, die cut paper and paperboard cardboard, envelopes, stationery, tags and labels, school supplies, basket liners, rug cores and paper, cellophane, and polyethylene bags are examples of the converted paper and paperboard products manufactured in Georgia. Some 43 plants located in Camden, Chatham, Clayton, Cobb, Crisp, DeKalb, Fulton, Lowndes, Muscogee, Peach, Polk, Richmond, Spalding, Ware and Whitfield counties employ a total of 3,500 workers. Twenty-six of these plants, with a total employment of 2,350, are located in the Fulton-DeKalb area. Of this group, the manufacture of bags accounts for one-third of all workers.

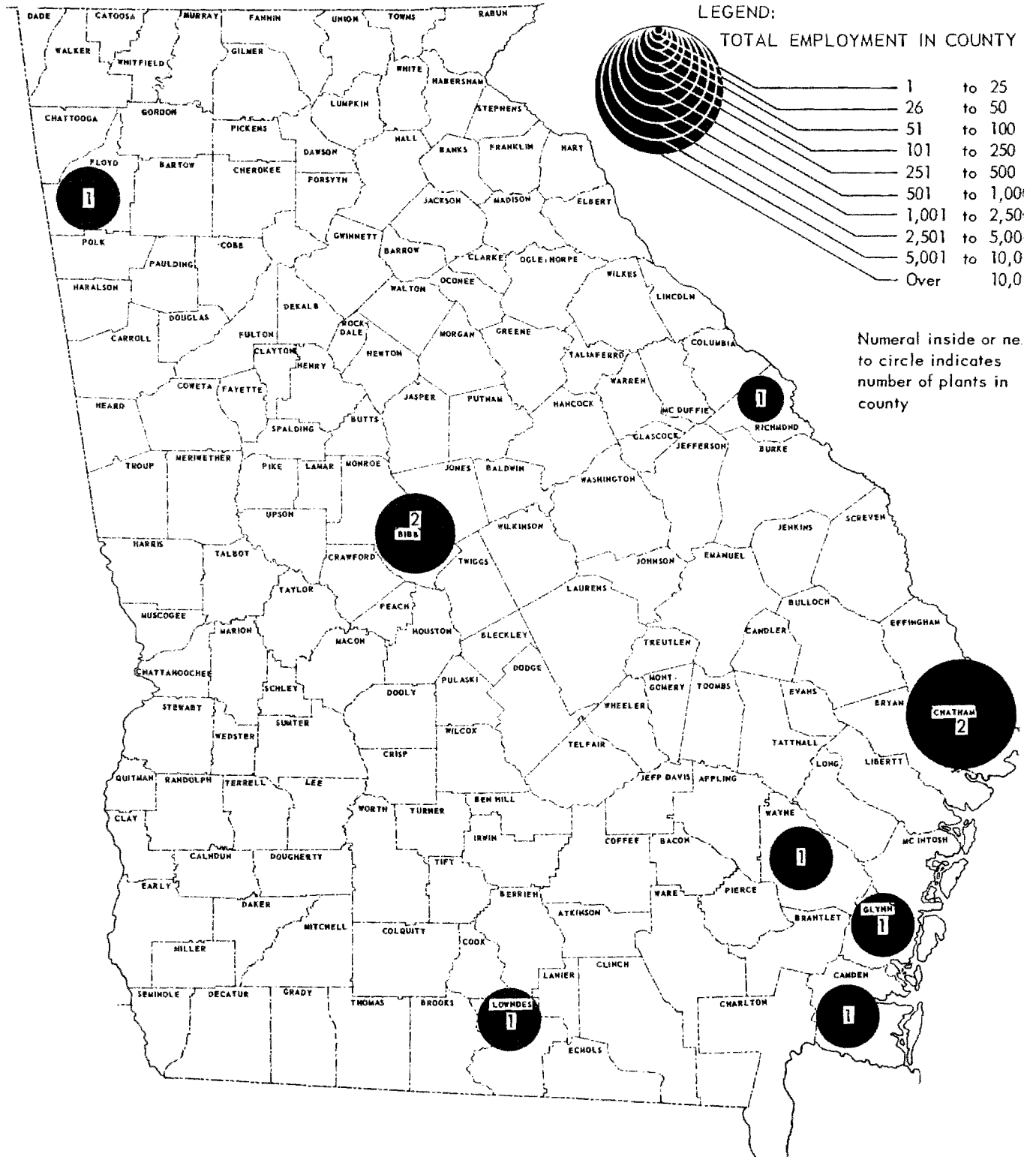
Paperboard containers and boxes are manufactured in 16 counties. Folding and set-up paperboard boxes, corrugated and solid fiber boxes, sanitary food containers and fiber cans, tubes and drums are examples of the products manufactured in Georgia's 37 plants, which employ about 4,500 workers. The Fulton-DeKalb area has 17 plants which employ a total of 2,700 workers in the manufacture of containers and boxes. Of this group the five manufacturers of folding boxes located in Cobb, DeKalb, Fulton, Gwinnett and Ware counties account for 36% of all employees.

Another 29% of the workers are employed in the 11 plants that manufacture corrugated and solid fiber boxes. Six of these plants are located in Fulton County with one each in Bibb, Chatham, Dougherty, Floyd and

Gwinnett counties. The plants manufacturing set-up paperboard boxes number eight and employ slightly over 300 workers. These plants are located in Bibb, Cobb, Floyd, Fulton, Muscogee and Toombs counties. Sanitary food containers are manufactured in Clarke, Coweta, Dougherty, Fulton and Richmond counties. These plants number six and employ nearly 1,000 workers. Seven plants -- one each located in Cobb, Polk and Walker and four in Fulton -- manufacture fiber cans, tubes and drums. Total employment in these plants is only 300.

Excluding the pulp, paper and paperboard mills, the largest plants in the paper and allied products industry are Kraft Bag Corporation, St. Marys (paper bags); Lily Tulip Cup Corporation, Augusta (paper cups and containers); Mead-Atlanta Paper Company, Atlanta (corrugated containers, cartons and folding boxes); Miller & Miller, Inc., Stone Mountain (labels and paper converting); and Montag Brothers, Inc., Atlanta (stationery and school supplies).

MAP 14-A PULP, PAPER AND PAPERBOARD MILLS



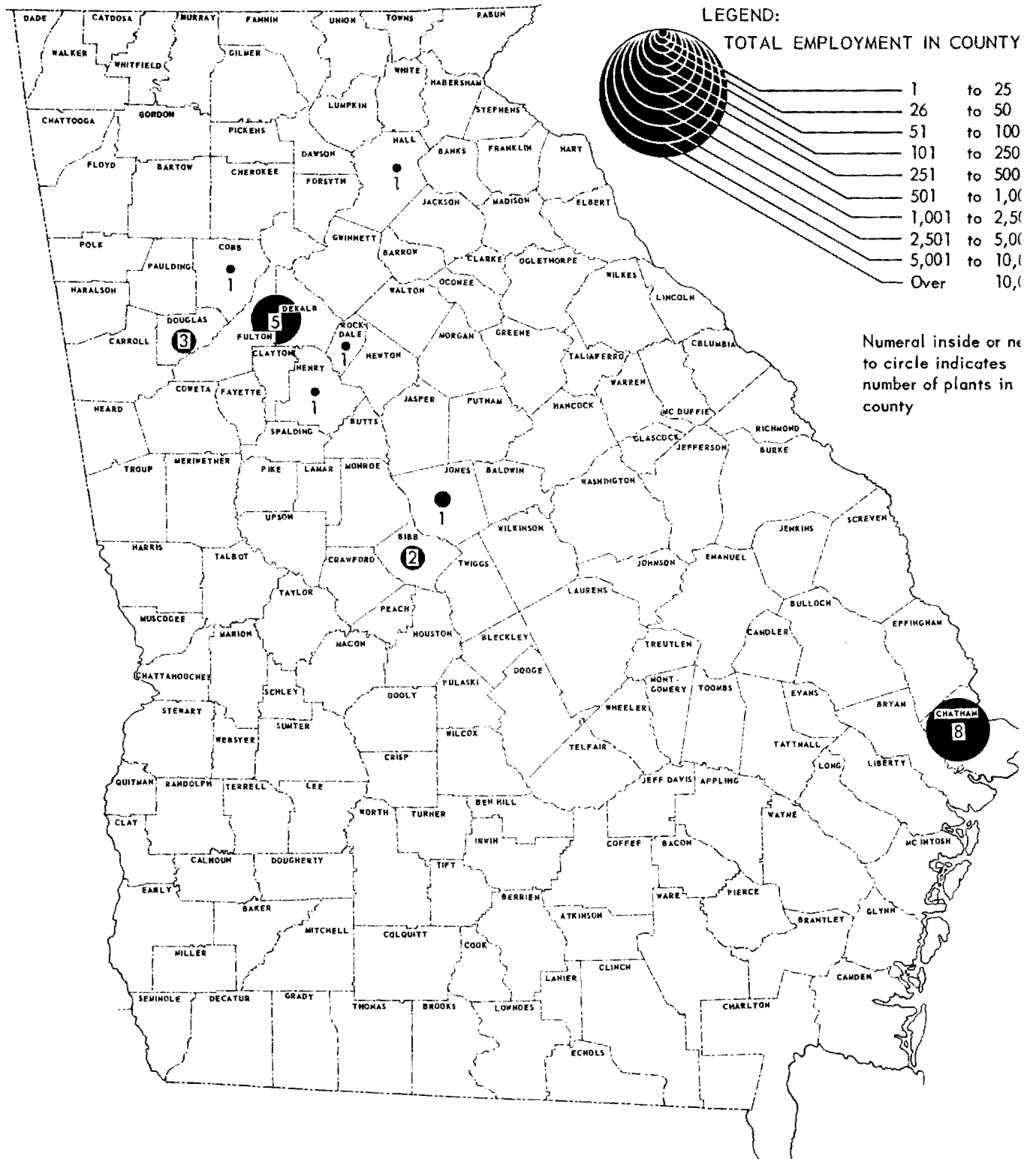
PAPER AND ALLIED PRODUCTS

Pulp, Paper and Paperboard Mills

Georgia's first paper mill -- Union Bag-Camp Company at Savannah (formerly Union Bag and Paper Company) -- was not established until 1936. Since that time nine other mills have begun operations in the State; seven of these have developed since 1947. Today, Georgia has two pulp mills, two paper mills, five paperboard mills, and one building paper mill. The most recent mill began operation in 1960 at Augusta.

The 10 pulp, paper and paperboard mills employ a total of 11,400 workers, or about 60% of the employees in Georgia's paper industry. Union Bag-Camp Company (kraft paperboard, bags and containers) and Continental Can Company, Inc. (kraft liner board) are located in Chatham County. Georgia Kraft Company (container board) and Armstrong Cork Company (insulation board and acoustical tile) are located in Bibb County. Brunswick Pulp and Paper Company and Rayonier, Inc., Georgia's two pulp mills, are located in Glynn and Wayne counties. St. Marys Kraft Company, the State's other paper mill, is located in Camden County. Rome Kraft Company in Floyd County, Owens-Illinois Glass Company in Lowndes County, and Continental Can Company in Richmond County are the three other paperboard mills in the State.

MAP 15 PETROLEUM PRODUCTS



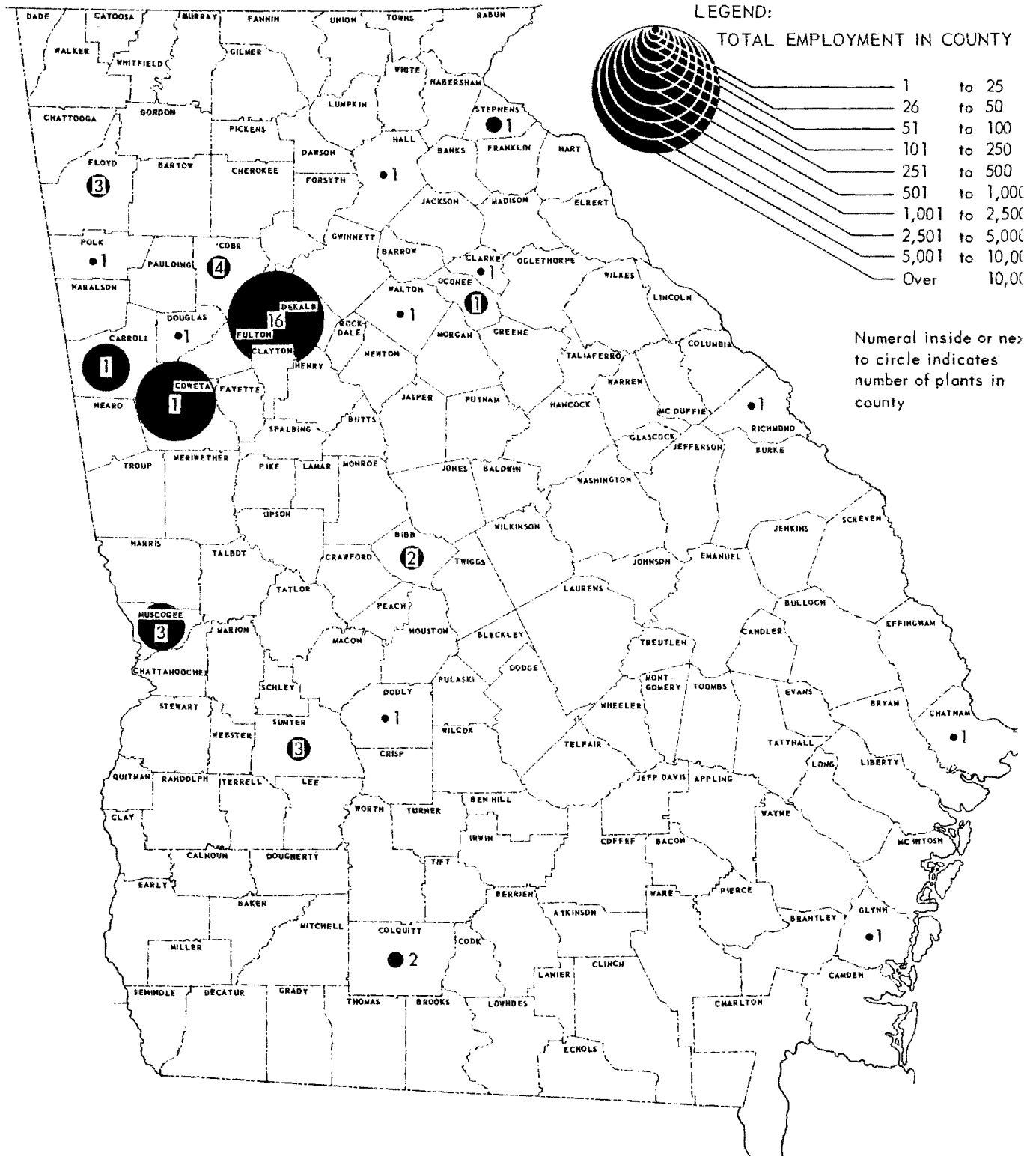
PETROLEUM PRODUCTS

The manufacture of petroleum products in Georgia ranks last among the 19 major industry groups in both total number of plants and employment. Twenty-three plants provide employment for about 1,150 workers.

Paving mixtures, roofing felts and coatings, and lubricants are the three product lines manufactured in the State. The 13 plants producing paving mixtures account for 49% of all employment and are located in Bibb, Chatham, DeKalb, Douglas, Fulton, Hall, Henry and Jones counties. Production of roofing felts and coatings is the second ranking product line, with 43% of the employment in five plants located in Chatham, Douglas and Rockdale counties. Lubricants are produced in Bibb, Chatham, Cobb and DeKalb counties, with five plants accounting for the remaining workers. Chatham County leads the State in both employment and number of plants in the production of paving mixtures and roofing felts and coatings and is second to Bibb in the production of lubricants.

Plant size varies from three employees to 300, with 18 plants employing fewer than 50 workers each. Only five of the 18 employ over 25. Four plants average more than 100 workers. They are The American Oil Company, Savannah (paving mixtures); Certain-Teed Products Corporation, Savannah (roofing felts and coatings); The Ruberoid Company, Savannah (roofing felts and coatings); and Sam Finley, Inc., Atlanta (paving mixtures).

MAP 16 PRIMARY METAL INDUSTRIES



PRIMARY METAL INDUSTRIES

Georgia's primary metal industries rank thirteenth among the major industry groups with about 5,100 employed in the 46 plants, which are located in 21 counties. Fulton-DeKalb, Coweta, Carroll and Muscogee, the leading counties, have a combined employment of more than 4,500 or nearly 90% of the State's total employment in the primary metal industries.

While activity in terms of employment and number of plants is limited when compared to other major industry groups, the activity as it relates to products is nevertheless quite varied. The product line ranges from steel mills and foundries, steel wire drawing, and gray-iron and malleable iron foundries to reclaiming of lead and aluminum, aluminum and other non-ferrous extrusions and drawing, non-ferrous wire drawing and insulating, aluminum, copper and brass foundries, and non-ferrous castings.

The steel and iron operations number 25 and employ about 3,000 workers. These plants are located in Clarke, Chatham, Cobb, Colquitt, Dooly, Douglas, Floyd, Fulton-DeKalb, Hall, Muscogee, Polk, Richmond, Stephens, Sumter and Walton counties. Of this group, the gray-iron foundries located in Clarke, Chatham, Colquitt, Douglas, Floyd, Fulton, Hall, Muscogee, Richmond and Walton counties are the most numerous, with 14 plants employing nearly 900 workers. Georgia's two steel mills are located in Fulton and Muscogee counties. One of the steel wire drawing operations is located in DeKalb County; the other three are in Sumter County. Dooly, Polk and Stephens counties each have a malleable-iron foundry. Cobb and Fulton share the State's two steel foundries.

The 21 non-ferrous operations employ about 2,100 workers. These plants are located in 10 counties -- Bibb, Carroll, Cobb, Colquitt, Coweta, Floyd, Fulton-DeKalb, Glynn and Oconee. In the non-ferrous operations product lines are less well defined, because a few companies perform several operations. One such company smelts and refines lead, aluminum, copper and brass. Another company refines aluminum, copper and brass and manufactures gray-iron castings.

However, the non-ferrous operations can be broken down into general classes. Three companies smelt, refine and reclaim lead, brass, bronze, copper and aluminum. Two of these (located in Cobb and Glynn counties) reclaim aluminum, while the other company, located in Fulton County, smelts lead and refines brass, bronze, copper and aluminum. A DeKalb company produces lead sheet and pipe, and a Fulton County company heat-treats non-ferrous

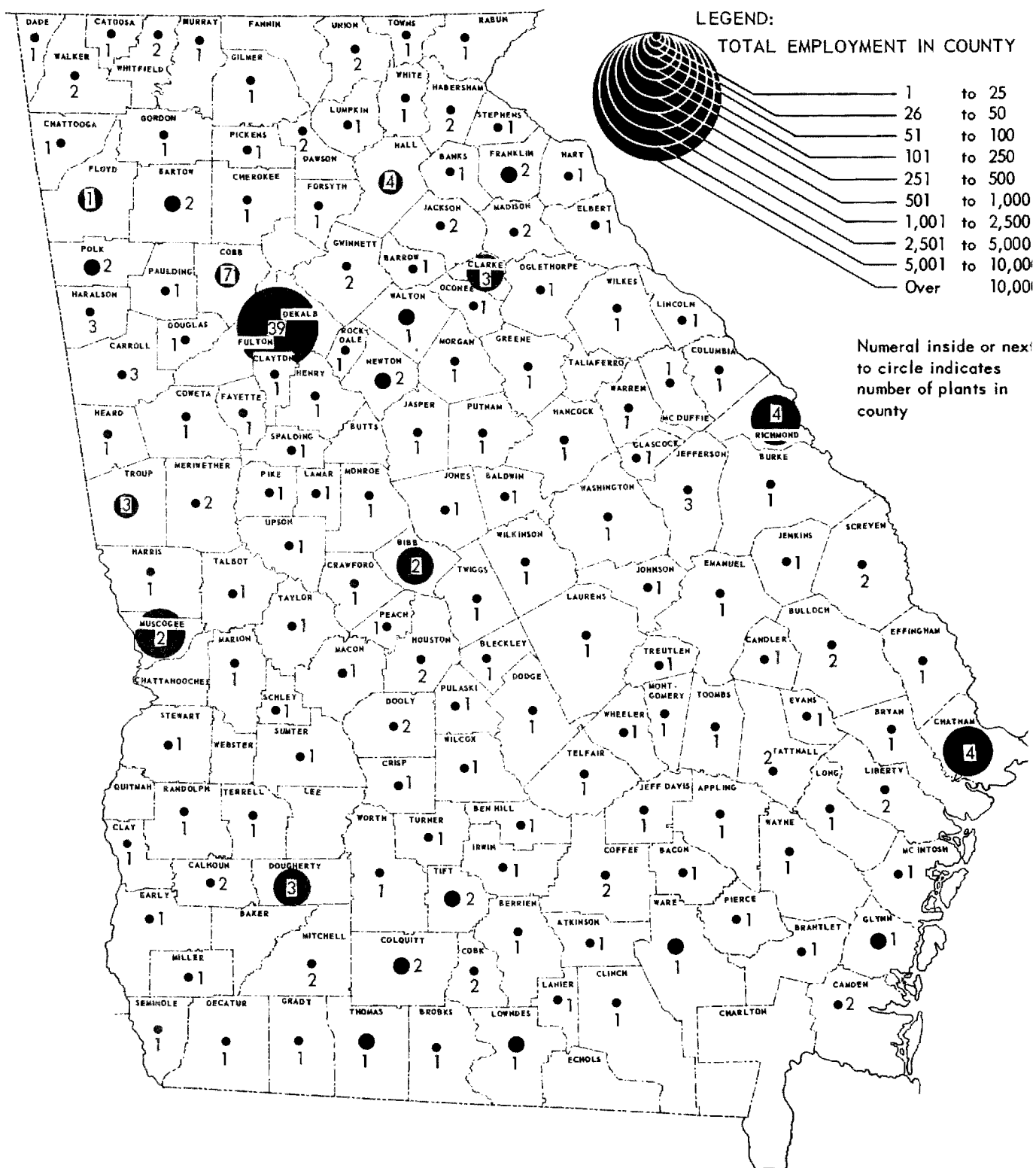
metals. Georgia has two aluminum extrusion plants, one located in Coweta County and the other in DeKalb. Three companies manufacture non-ferrous wire and cable. They are located in Carroll, DeKalb and Oconee counties.

The remaining 11 companies cast non-ferrous metals. Four of these produce aluminum castings and one makes brass castings. The remaining six produce aluminum castings, as well as zinc, bronze and brass castings. These plants are located in Bibb, Cobb, Colquitt, DeKalb, Floyd and Fulton counties.

Primary metals operations in Georgia are for the most part small, since 37 plants employ fewer than 51 workers and 25 of these have fewer than 25 workers each. Six plants, however, employ 100 or more workers, and the State's two largest employ more than 1,000 workers each. Georgia's four largest plants are Atlantic Steel Company, Atlanta (rolled steel and wire); The William L. Bonnell Company, Inc., Newnan (aluminum extrusions); Grinnell Corporation, Atlanta (gray-iron castings); and Southwire Company, Carrollton (non-ferrous wire and cable).

MAP 17-A

PRINTING AND PUBLISHING



PRINTING, PUBLISHING AND ALLIED INDUSTRIES

Printing and Publishing

The printing and publishing industry is Georgia's most ubiquitous industry -- one or more firms are found in 152 of the State's 159 counties. Baker, Chattahoochee, Echols, Lee, Quitman, Taliaferro and Webster are the only counties lacking the services of a printing firm.

While this industry has the largest geographical coverage of any major industry group, only about 9,900 are employed in the State's 500 plants. It is noteworthy that between 1939 and 1954 employment more than doubled (from an estimated 4,500 to 9,420), but between 1954 and 1958 only 180 employees were added.^{1/}

For purposes of presentation two maps -- "Printing and Publishing" and "Commercial Printing and Services" -- are used to show the locations of the two major segments of the industry. Map 17-A, "Printing and Publishing," includes newspapers, periodicals and book printing and publishing. Map 17-B, "Commercial Printing and Services," includes all types of commercial printing, the manufacture of manifold business forms, greeting cards, blankbooks, loose leaf devices, library binders and ruling paper, bookbinding and related work, and the service industries for the printing trade.

It should be recognized that some overlap exists in services rendered by many of the firms in the printing and publishing industry. For example, commercial printing is frequently carried on by establishments engaged in printing and publishing newspapers. Likewise, some of the general printing shops specialize in printing newspapers and periodicals for others. This is particularly true in those counties where only one or two firms exist or where there are several small firms, each competing for small volume jobs as a side line to their primary activity. In this case, the local printer is called upon for a variety of services. To prevent duplicate listing, each firm is listed under its most significant type of service. Therefore, all firms are shown only once on the two maps, either as a publisher or as a commercial printer, but not as both.

^{1/} Bureau of the Census, 1954 Census of Manufactures and 1958 Census of Manufactures.

The publishing segment of the printing and publishing industry in Georgia employs around 5,000 workers. Newspapers account for 205 of the 241 plants in this segment and employ approximately 4,300 workers. For the most part these are small operations, with 182 firms employing from one to 25 workers; 156 of these have fewer than 10 workers each. Periodicals represent the next largest group, with 25 plants employing slightly less than 500 workers. The remaining 11 firms, employing about 230, print and publish a variety of books such as school books, yearbooks, law books, directories, song books, installment finance charts and related tabular material.

As Map 17-A indicates, Georgia's six metropolitan areas and Clarke County are the principal centers of the publishing industry. Almost three-fourths of the total work force is employed in the seven areas. The Atlanta Metropolitan Area (five counties) with its 49 plants accounts for around 45% of the workers.

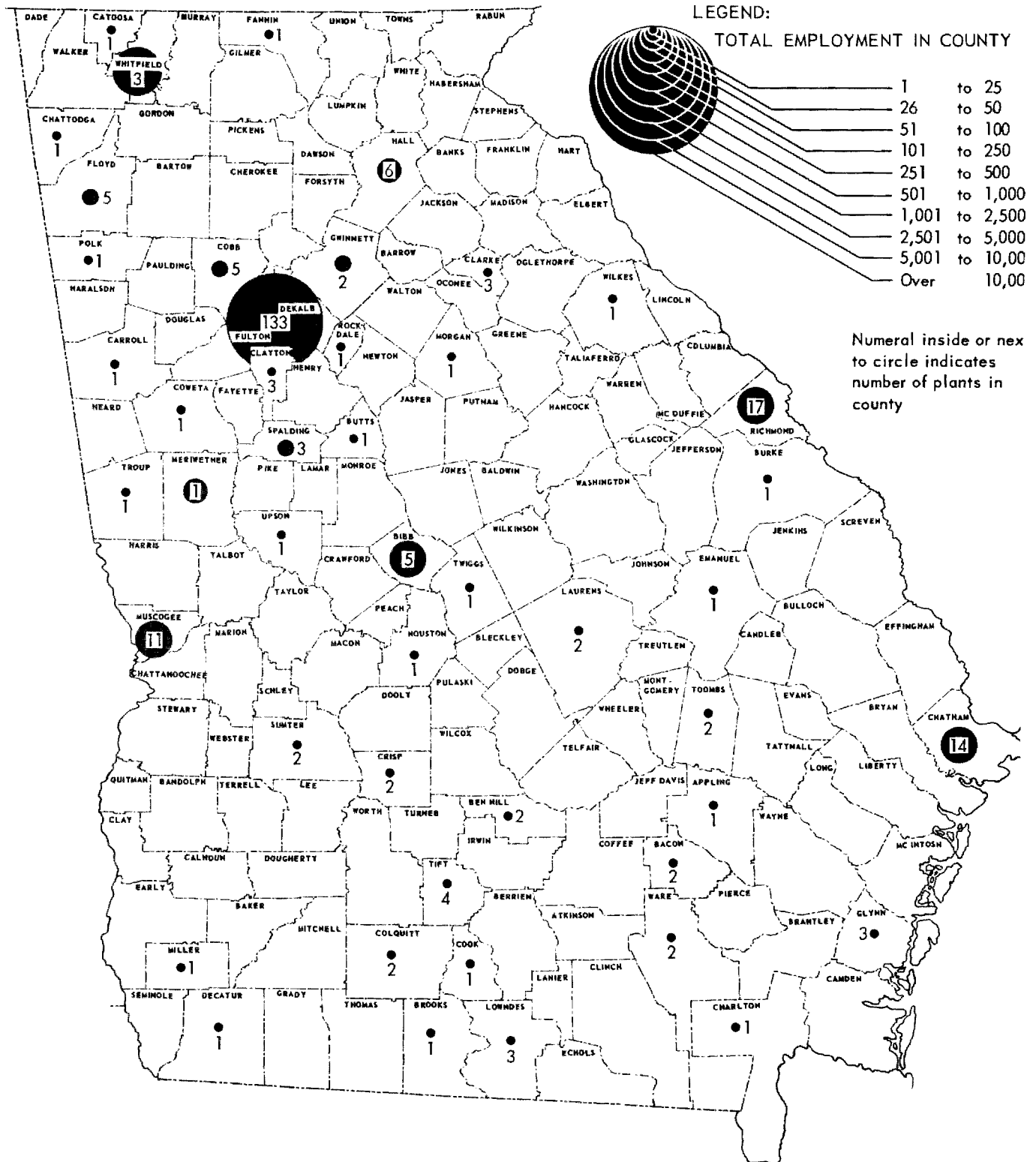
While one or more newspapers (daily or weekly) are published in 152 counties, Fulton County leads the State with seven firms and a total employment of more than 1,600 workers. Atlanta Newspapers, Inc., the State's largest firm, accounts for about 90% of the employees in Fulton County. The other large newspaper publishers in Georgia are Savannah Newspapers, Inc., Ledger-Enquirer Company (Columbus), Southeastern Newspapers, Inc. (Augusta), The Macon Telegraph Publishing Company, and The Albany Herald. All of these companies employ more than 100 workers.

Periodicals have a rather limited geographical distribution within the State. Eighteen are published in Fulton County; nearly 400 persons work for these firms. The other periodicals are published in Bibb, DeKalb, Dougherty, Franklin, Gwinnett, Hall and Richmond counties.

Book printing and publishing is also concentrated in Atlanta, which has all but three of the plants and 140 of the employees. Of the remaining plants, Clarke County has two and Cobb has one.



MAP 17-B COMMERCIAL PRINTING AND SERVICES



PRINTING, PUBLISHING AND ALLIED INDUSTRIES

Commercial Printing and Services

The 259 Georgia firms engaged in commercial printing and services provide jobs for nearly 4,900 persons. Concentration is in the Fulton-DeKalb area where 133 firms employ slightly over 3,500 of this total and in Bibb, Chatham, Muscogee, Richmond and Whitfield counties where 50 firms provide jobs for another 750 persons. Thus seven counties account for over 85% of all the employment in this grouping.

Of the industries included on Map 17-B, 219 of the firms and 3,850 of the workers are engaged in commercial printing. The commercial printing group is composed of three classes of printing processes: (1) commercial printing (except lithographic), (2) commercial printing (lithographic), and (3) engraving and plate printing. Georgia has only three plants (two in Atlanta and one in Gainesville) in the third category.

Firms engaged in commercial printing (except lithographic) are the most numerous of the commercial printing group -- some 184 plants employing around 2,400 workers. For the most part these firms are small operations, with 164 firms employing from one to 25 workers and 131 of these having fewer than 10 workers each. Fulton County has 74 of these firms as well as the only three in Georgia that employ more than 100 persons. They are Ruralist Press, Inc., The Stein Printing Company, and Dittler Brothers, Inc. Chatham and Richmond counties have the next largest number of firms, 12 each, but neither county's total employment reaches 100, whereas the total employment in Fulton County exceeds 1,600 workers.

Firms principally engaged in printing by the lithographic process employ almost 1,400 workers in 32 plants. Besides Fulton County, these firms are located in DeKalb, Floyd, Glynn, Hall, Miller, Muscogee, Richmond and Whitfield counties. Fulton County is the center of this industry, with 20 plants that employ about 950 persons, although the State's largest plant, L. A. Lee Company, Inc., is located in Whitfield County. Foote and Davies, Inc., and John H. Harland Company, both in Fulton County, are the next largest lithographic printers in Georgia.

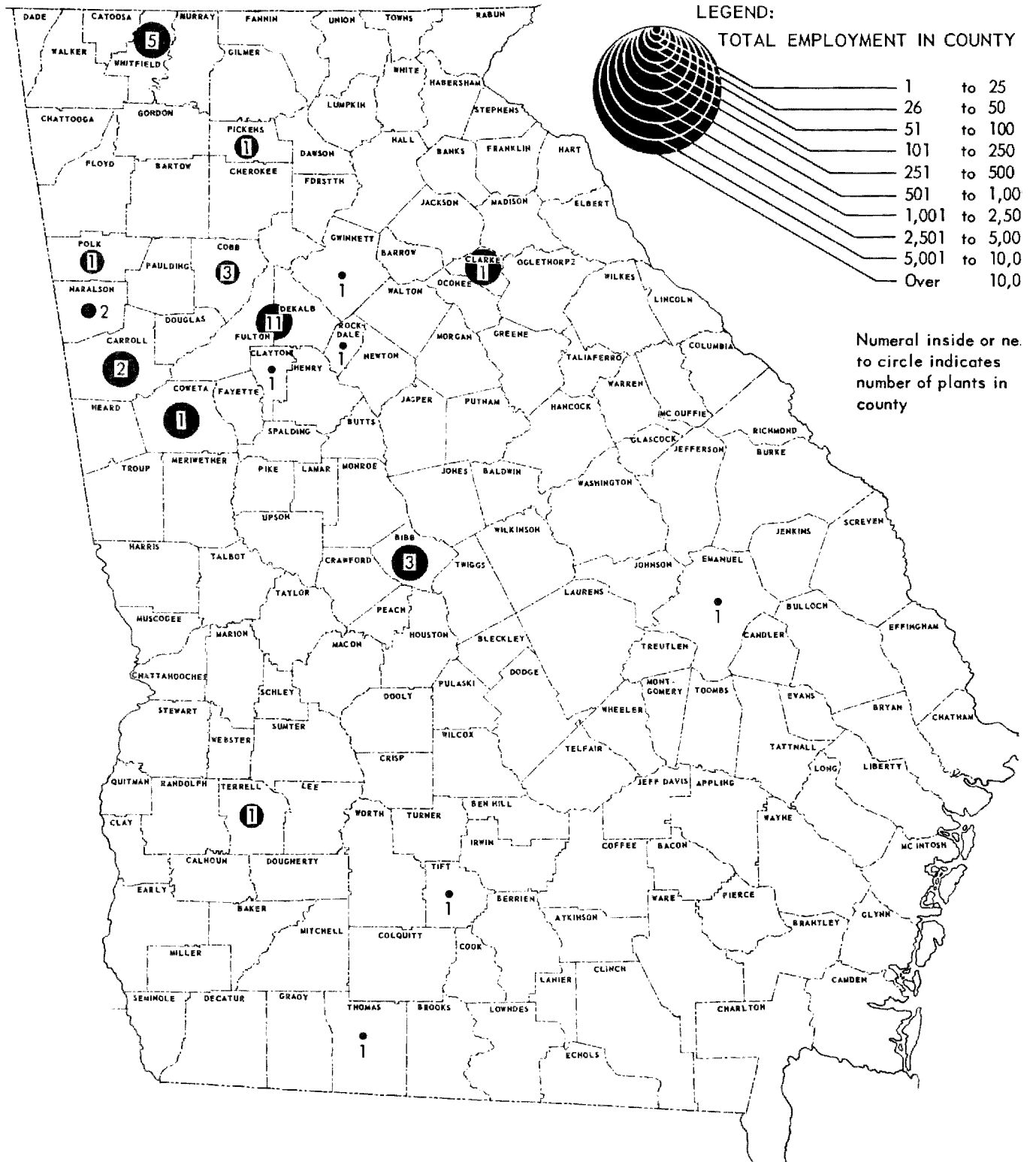
Of the remaining 40 firms shown on Map 17-B, those engaged in book-binding and related industries, services for the printing trades and in the manufacture of greeting cards and manifold business forms have a total

employment average of approximately 1,050. About 500 of these workers are engaged in the manufacture of business forms and another 470 are employed in the service industries for the printing trades.

Nine firms located in Emanuel, Fulton, Hall, Meriwether, Morgan, Muscogee and Rockdale counties manufacture manifold business forms. Fulton County has three of these firms including the State's largest, Ivan Allen Company. All of the manufacturers of greeting cards (four firms) are in Atlanta, as are six of the seven firms engaged in bookbinding and related services. The seventh bookbinder is found in Muscogee County.

Service industries for the printing trades (typesetting, photoengraving, electroplating and stereotyping) are also concentrated in Atlanta, with 19 of the 24 plants and 380 of the 470 employees. Chatham, with two firms, and Bibb and Richmond, with one each, are the locations of the other photoengraving firms in Georgia. Gwinnett County has the only other electroplating firm outside of Atlanta.

MAP 18 RUBBER AND PLASTICS PRODUCTS



RUBBER AND PLASTICS PRODUCTS

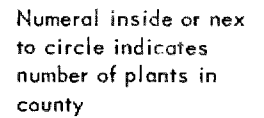
Employment in the rubber industries of Georgia is small, with 25 plants employing approximately 1,000 workers. The plastics fabricators are even less numerous, with only 12 plants employing slightly fewer than 400. While this major industry group has a greater geographic dispersal (18 counties) than either electrical machinery, leather, instruments or petroleum products, its 1,360 employees rank it only slightly above instruments in total employment.

Over 75% of the employment in the rubber industries is engaged in the manufacture of fabricated rubber products, such as latex compounds and adhesives, rug backings, printing plates, and foam products. The remaining 25% compound and mold tire tread or manufacture tire patches and boots.

Plastic panels, toys, decorative laminates, salt shakers, ear molds for hearing aids, sheet plastic, and plastic packaging materials are examples of products produced by the plastic fabricators in Georgia.

Plant size in this major industry group ranges from three or four to fewer than 200 employees, with 25 of the plants employing fewer than 26 workers each and only three employing over 100. The three largest plants are Southeast Rubber Manufacturing Company, Athens (tread rubber); Textile Rubber Company, Inc., Bowdon (rubber and plastic molded items); and The Newnan Corporation, Newnan (high-pressure decorative laminates).

STONE, CLAY AND GLASS PRODUCTS



STONE, CLAY AND GLASS PRODUCTS

Stone, clay and glass products rank eighth in total employment among the major industry groups in Georgia. Some 337 plants employ approximately 12,000 workers.

Map 19 shows the location of all the plants in this industry. Concrete products, while included in this map, are shown separately (Map 19-A) because they constitute, both in total employment and number of plants, the largest segment of the stone, clay and glass industry.

Six areas (Fulton-DeKalb, Richmond, Elbert, Bibb, Pickens and Chatham) stand out as the State's major employment centers. These seven counties account for more than 62% of the industry's total employment. Elbert County has the same number of firms (53) as the Fulton-DeKalb area, but in total employment it has about 1,300 workers compared to nearly 2,800 in the Fulton-DeKalb area. Moreover, all of Elbert's firms are engaged in one industry, granite, whereas the Fulton-DeKalb area is Georgia's most diversified area. Concrete products account for 43%, glass products 34%, and structural clay products 10% of the workers in the Fulton-DeKalb area.

Almost 93% of Richmond County's 1,300 workers and over 62% of Bibb County's 1,000 workers in this industry group are engaged in the manufacture of structural clay products. Pickens County is the marble center of Georgia, with almost all of its 775 workers engaged in that industry. Chatham County has 52% of its 550 workers engaged in the production of gypsum products and another 44% in the production of concrete products.

At least 20 different major product types in the stone, clay and glass industry are represented in Georgia. Several of these, however, are represented by only one or two plants. Examples of the one-plant representatives are blown glass products in Floyd County and vitreous china plumbing fixtures and non-clay refractories in Fulton County. Seven other products are represented in Georgia by only two plants. Hydraulic cement is manufactured in Houston and Polk counties, with the plant in each county employing over 100 workers. Clay sewer pipe and drain tile are manufactured in Baldwin and Columbia counties. Oconee Clay Products Company in Baldwin County, also producers of structural clay tile and clay refractories, is one of the State's largest plants in the stone, clay and glass products industry.

Two large plants, Bestwall Gypsum Company at Brunswick and National Gypsum Company at Savannah, are the only manufacturers of gypsum products in the State. U.S. Rubber Company in Troup County is the larger of the two manufacturers of asbestos products in the State. The other plant is in DeKalb County. Fulton County has the only two firms engaged in coating and wrapping pipe and in manufacturing gaskets and packing for steam, water and other pipe joints. Both of these companies are quite small. The only place mineral wool is manufactured is in Fulton and DeKalb counties. Among the larger plants in the State are the two manufacturers of glass containers. Knox Glass Company has a plant in Clayton County, while Owens-Illinois Glass Company selected a site in Fulton County for its plant.

Clay refractories are manufactured in four plants located in Baldwin, Bibb, Cobb and Richmond counties, the largest of which is the Babcock and Wilcox Company's firebrick plant at Augusta. Five small firms (all in the one to 25 employee class) manufacture glass products from purchased glass. Fulton County has three of these firms; DeKalb and Ware counties have the other two.

Georgia's pottery manufacturers are the smallest plants in this major industry group. Average employment for the eight plants in Georgia is only six workers per plant. These plants are located in Banks, Bartow, Bibb, Clayton, Cobb, Hall and Meriwether counties.

More than 1,600 persons are engaged in the manufacture of brick and structural clay tile in Georgia. Bibb County has three of the State's largest brick operations. The remaining plants are in Gordon, Thomas and Whitfield counties.

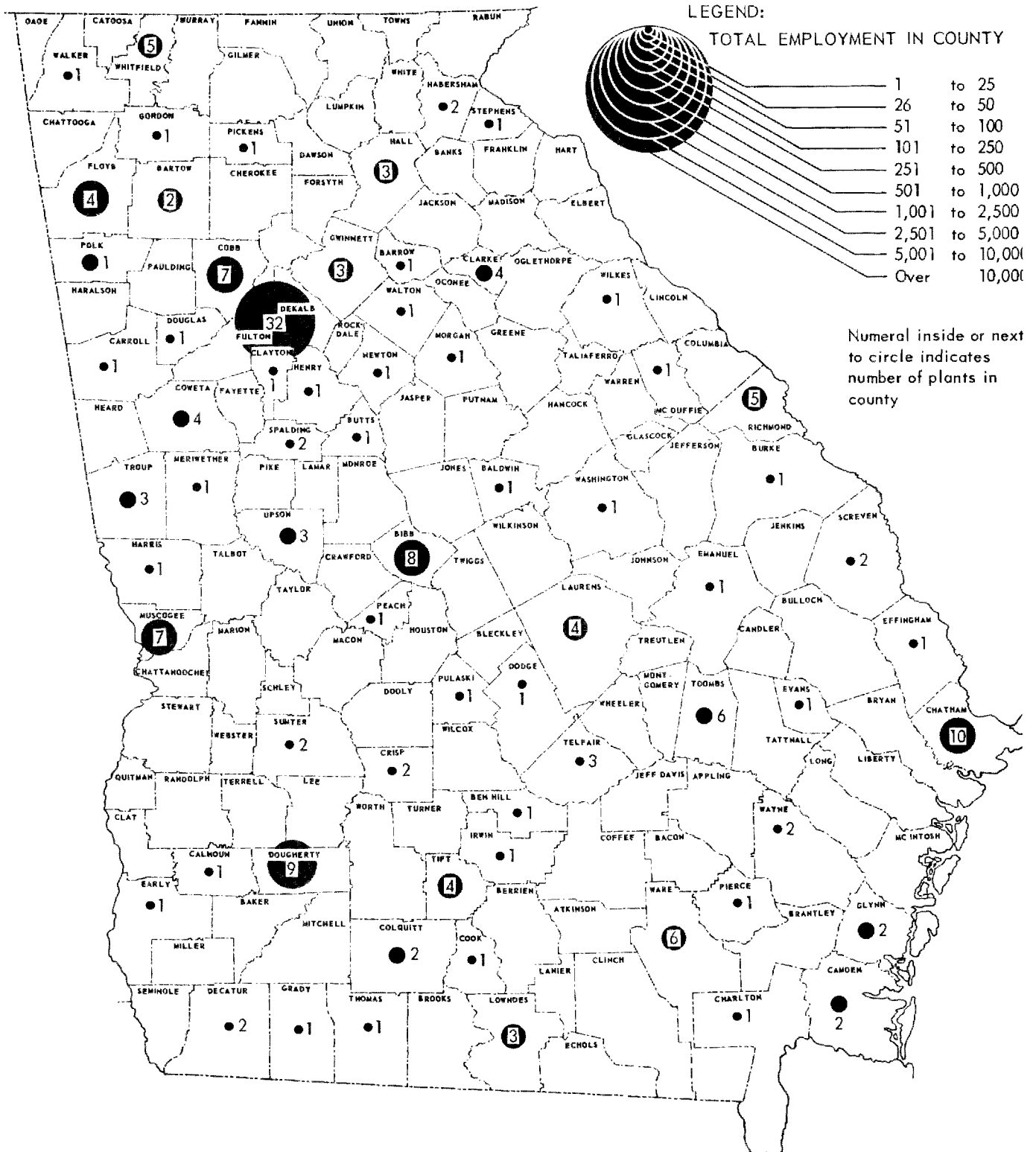
Eighteen plants, employing slightly more than 650 persons, produce ground or otherwise treated minerals and earths. These operations, widely dispersed over Georgia, are found in Bartow, Bibb, Chatham, Fulton, Grady, Hart, Jasper, Jefferson, Murray, Polk, Thomas, Washington and Whitfield counties. Murray leads the State in number of plants, but Jasper has the largest operation.

Firms primarily engaged in cutting, shaping and finishing marble, granite, slate and other stone for building and miscellaneous use employ more workers (almost 2,400) than any of the other major product type represented in Georgia's stone, clay and glass industry. Elbert County has 53 of the State's 83 firms and 54% of the employees. The remaining 31 plants

are located in 21 counties. Generally these firms are quite small, with 63 employing from one to 25 employees and only four employing more than 100 workers.

While Elbert County has the most firms, Pickens has the State's largest, Georgia Marble Company, with two plants -- one at Nelson and one at Tate. Coggins Granite Industries, Inc., at Elberton is the largest firm in the granite industry.

MAP 19-A CONCRETE PRODUCTS



STONE, CLAY AND GLASS PRODUCTS

Concrete Products

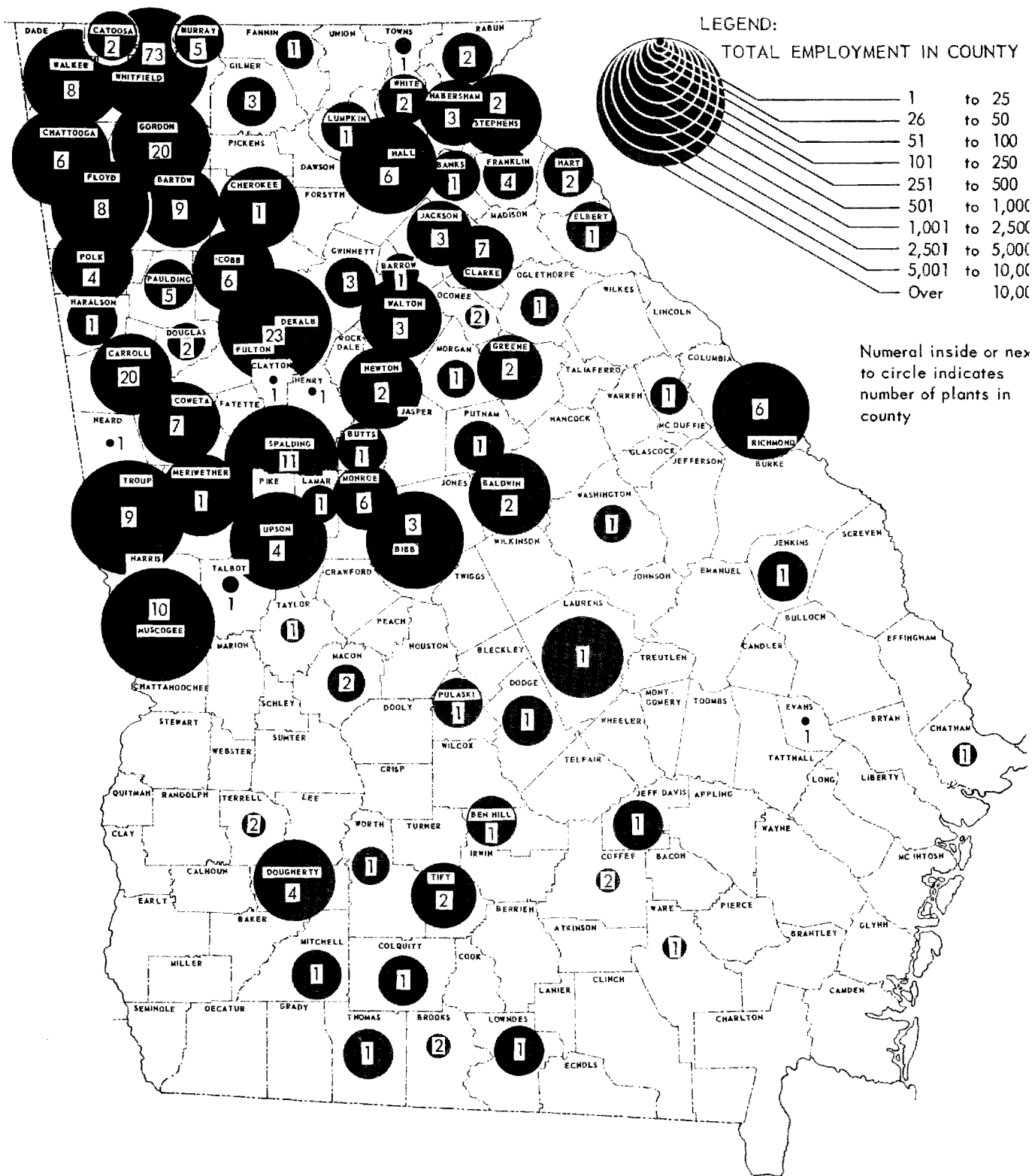
Concrete products form the largest segment of the stone, clay and glass industry in Georgia. Approximately 3,700 are employed in the 192 firms, which are dispersed geographically in 69 counties. Eight counties -- Bibb, Chatham, Cobb, DeKalb, Dougherty, Floyd, Fulton and Muscogee -- are the State's major employment centers in this industry, with over 60% of the workers. The Atlanta Metropolitan Area (five counties) alone accounts for 36% of the workers, however.

This segment of the industry is composed of three groups of plants: (1) concrete block and brick; (2) concrete products, except block and brick; and (3) ready-mix concrete. The firms manufacturing concrete products except block and brick are the most numerous (85) and have the widest geographical coverage (45 counties) of the three groups. Total employment is approximately 1,400 in this group. Vulcan Materials Company, manufacturers of concrete pipe, owns the two largest plants in Georgia, one in Atlanta and one in Decatur.

Concrete block and brick manufacturers are second in number and coverage, located in 36 counties. They employ about 1,100 workers, but only two firms in this group employ over 50 workers and none have more than 100 workers.

The producers of ready-mix concrete cover a more limited geographical area (32 counties) but employ over 1,200 in 50 plants. Among the largest ready-mix concrete firms are MacDougald Warren, Inc., in Atlanta and Whitley Construction Company in Decatur.

MAP 20
TEXTILE MILL PRODUCTS



TEXTILE MILL PRODUCTS

Georgia's most important industry, in terms of total employment, is the manufacture of textile products (Map 20). Nearly one-third of the State's industrial workers are engaged in some form of textile production. Georgia ranks first in the nation in the production of tufted textile products, but is third behind North Carolina and South Carolina in total textile activity.

Textiles have shown a continued decline in employment on the national scene since 1947, commanding 8.6% of the nation's manufacturing workers in 1947, but only 5.8% in 1958. The same trend is evident in Georgia's textile complex. In 1947 Georgia had 102,535 persons in textiles, or 41% of all manufacturing employees.^{1/} By 1958 the number had decreased to 94,933 representing only 30% of all industrial workers.^{2/} Certain segments of the industry experienced significant gains in employment between 1947 and 1958 while others underwent major cutbacks. Cotton mills suffered the greatest declines in employment and, to a lesser degree, knitting mills and yarn and thread mills also registered decreases. The most notable growth segments were in the manufacture of carpets and rugs and tire cord and fabric. The woolen operations and synthetic fiber fabric mills also experienced modest gains during this period.

In 1960, some 97,300^{3/} persons were employed in 344 plants in Georgia, of which more than half (50,874) worked in 10 counties: Chattooga, Floyd, Fulton-DeKalb, Muscogee, Spalding, Troup, Upson, Walker and Whitfield. Fabric mills, knitting mills, floor covering mills, and yarn, thread and cord mills comprise the most significant segments of the State's textile complex. Each segment is shown separately on maps 20-A through 20-D. The remaining textile operations are combined in a miscellaneous group and are discussed below.

Miscellaneous Textile Products

The dyeing and finishing of textiles, felt goods, paddings and upholstery filling, processed textile waste, artificial leather and oilcloth, linen towels and burlap bags comprise the miscellaneous segment of the

^{1/} Bureau of the Census, 1947 Census of Manufactures.

^{2/} Bureau of the Census, 1958 Census of Manufactures.

^{3/} IDB's count not comparable with Census data.

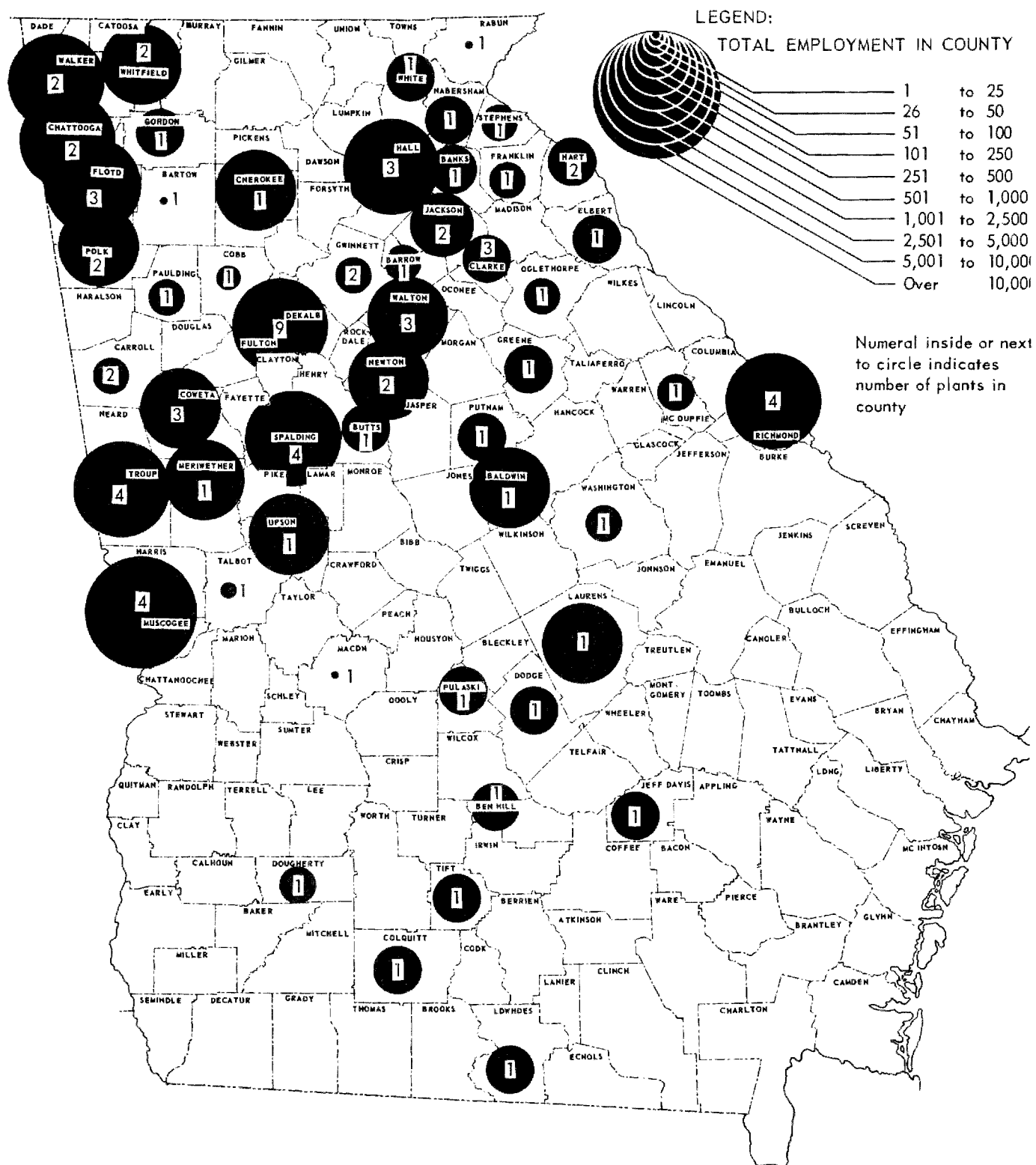
textile industry. These products are manufactured in 31 plants located in 13 counties. The total employment of the 31 plants is over 3,000.

Dyeing and finishing operations are the most numerous of this group, with 15 plants employing 2,340 persons in Carroll, Gordon, Spalding, Upson, Walker and Whitfield counties. Whitfield County has seven of these operations, but only one-tenth of the employment. The two largest dyeing and finishing plants are located in Griffin and Thomaston, each with a total employment exceeding 500. Only three other plants employ over 100 workers each. Two of these are located in Walker County and one in Carroll County.

Of the remaining plants in this group, two -- located in Augusta and Waycross -- produce felt goods. Six manufacture batting, padding, wadding and filling for upholstery, pillows, quilts and apparel. Four of these are located in Atlanta, with one each in Jefferson and Chamblee. The four textile waste processors are found in Atlanta, Dalton, East Point and West Point. The lone manufacturer of artificial leather and oilcloth is in Columbus, and the only manufacturer of linen goods is in Griffin. The two plants making burlap bags are found in Columbus and Savannah. Employment in these plants ranges from six to between 100 and 150, with only two employing over 100 workers.

The seven largest companies in the miscellaneous segment of the textile industry are Columbus Fiber Mills, Columbus (artificial leather, oilcloth, and plastic yarn); Printed Fabrics Corporation, Carrollton (textile screen printing); South Lowell Bleachery, Griffin (cotton finishers); Standard Bag Company, Inc., Augusta (jute and felt padding); Standard-Coosa-Thatcher Company, Rossville (dyeing and finishing); Thomaston Mills, Thomaston (cotton finishers); and Yates Bleachery, Flintstone (cotton finishers).

MAP 20-A
FABRIC MILLS



TEXTILE MILL PRODUCTS

Fabric Mills

Georgia's 91 fabric mills account for 54% of all textile employment. These mills for the most part are located north of the fall line, with the greatest concentration of workers found in Muscogee, Troup, Fulton, Spalding, Floyd and Chattooga counties, respectively. Together, these six counties with 24 plants account for 43% (23,300) of the employment in fabric mills. Chattooga, Floyd and Troup, respectively, have the largest single mills in the State, each employing over 2,000 workers.

As noted previously, Census data show a decline in Georgia's total textile employment between 1947 and 1958 -- a loss of some 7,600 workers.^{1/} For the same period fabric mills experienced an even greater decline -- 16,637 employees, from 71,353 in 1947 to 54,716 in 1958. A closer look at the major segments of fabric mill operations indicates that cotton mills lost over 21,000 workers during this period (from 65,277 to 44,016), while gains were registered in the synthetic broad-woven fabric mills and woolen operations of 1,618 and 2,727 workers, respectively. Employment in the narrow fabric mills have experienced only minor decreases.

In 1947, employment in the cotton mills accounted for almost 64% of all textile workers in Georgia, but by 1958 they employed only 46% of the total.^{2/} IDB's data show that cotton mills (broad-woven fabric) outnumber all other fabric mills by 2.3 to 1 and employ 80% of the workers. Generally, these mills are large operations. Of the State's 63 cotton mills, only four employ under 100 workers, while almost half of the plants employ over 500. Moreover, one-fourth of the mills have a work force that exceeds 1,000 and, as a group, employ 55% of all cotton mill workers. Seven mills employ more than 1,500 workers. They are Bibb Manufacturing Company, Columbus; Callaway Mills, Inc., LaGrange; Dundee Mills, Inc., Griffin; Fulton Cotton Mills, Atlanta; Pepperell Manufacturing Company, Lindale; Riegel Textile Corporation, Trion; and Swift Manufacturing Company, Columbus.

^{1/} See page 129.

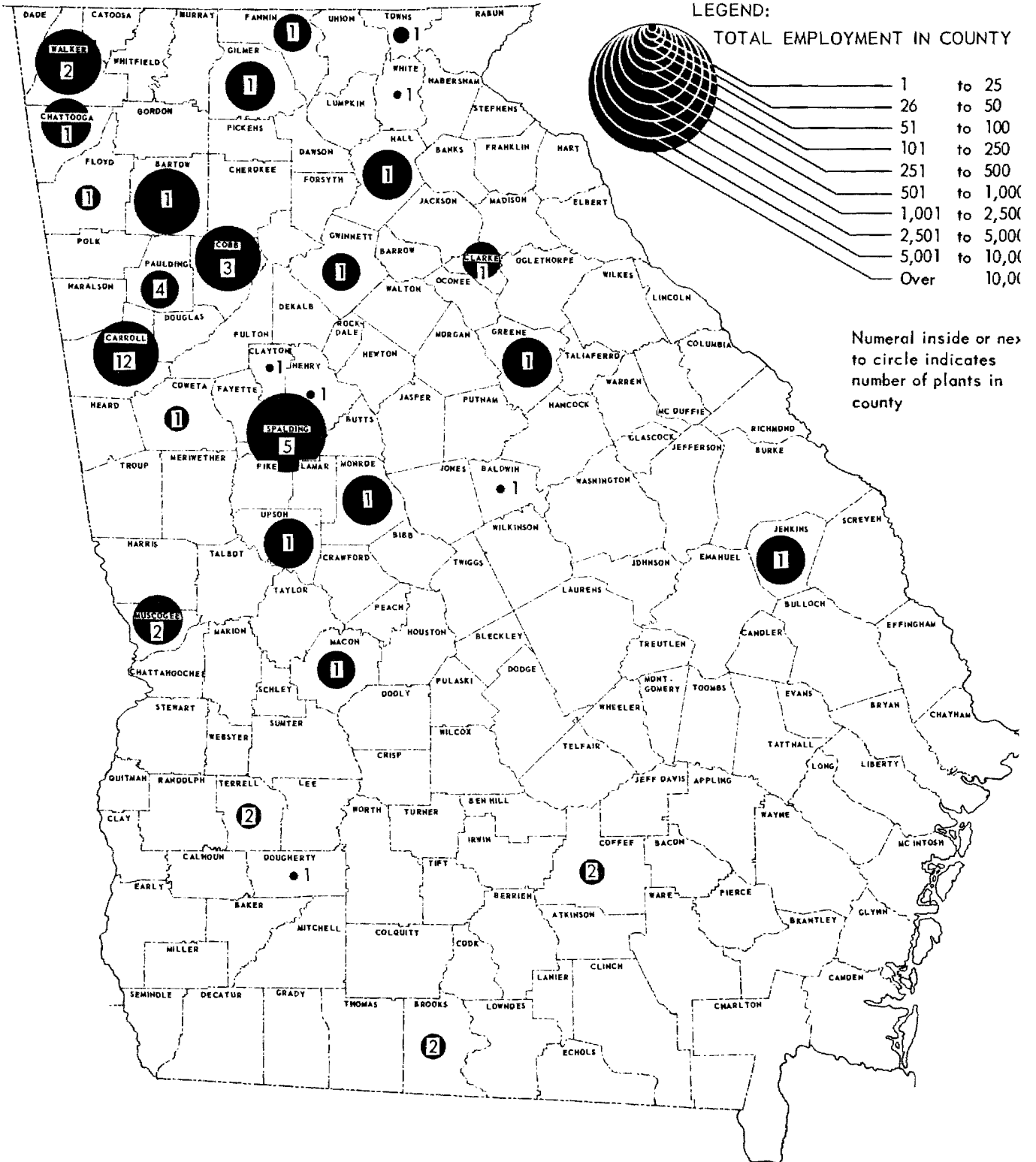
^{2/} Bureau of the Census, 1947 and 1958 Census of Manufactures.

Woolen mills likewise tend to be large operations, with the three plants that employ over 1,000 workers accounting for three-fourths of the employment in the woolen industry. The State's nine woolen mills are located in Baldwin, Barrow, Bartow, Fulton, Laurens, Polk, Tift, Walker and White counties. In 1960, Peerless Woolen Mills, Division of Burlington Industries, Rossville, operated Georgia's largest woolen mill. This mill has since closed and now J. P. Stevens and Company, Inc., with plants at Dublin and Milledgeville, operates the State's only woolen mills that employ over 1,000 workers.

Synthetic fiber and silk mills (broad-woven fabric) generally range in size from 100 to 1,000 workers, with only one plant employing less than 100 and one employing more than 1,000. Georgia has 11 of these operations, located in Banks, Coweta, Floyd, Franklin, Gwinnett, Habersham, Hart, McDuffie, Newton, Troup and Whitfield counties. Bibb Manufacturing Company, Porterdales; Klopman Mills, Inc., Shannon; and West Point Manufacturing Company, LaGrange, are Georgia's largest synthetic fiber (broad-woven fabric) mills.

Narrow woven fabric mills are the smallest operations in this segment of the textile industry, with eight plants accounting for less than 1% of all fabric mill employment. The State's largest narrow fabric mill (West Georgia Mills, Inc., Whitesburg) employs fewer than 150 workers; the remaining mills employ less than 50 each. Narrow fabric mills are found in Carroll, Clarke, Fulton, Gwinnett, Macon and Talbot counties. Both Carroll and Clarke counties have two mills each.

MAP 20-B
KNITTING MILLS



TEXTILE MILL PRODUCTS

Knitting Mills

Georgia's knitting industry, with 53 plants employing 9,000 workers, accounts for 15% of all plants, but only 9% of the employment in the textile group. Knitting mills, like fabric mills, are concentrated in north Georgia. Carroll and Spalding counties lead the State in total number of plants, and Spalding is first in employment, followed by Carroll and Bartow.

Almost all of the knitting operations in the State manufacture either hosiery or underwear, with hosiery mills dominating the knitting complex. There are 42 hosiery mills employing nearly 6,200 and six knit underwear mills employing 2,100.

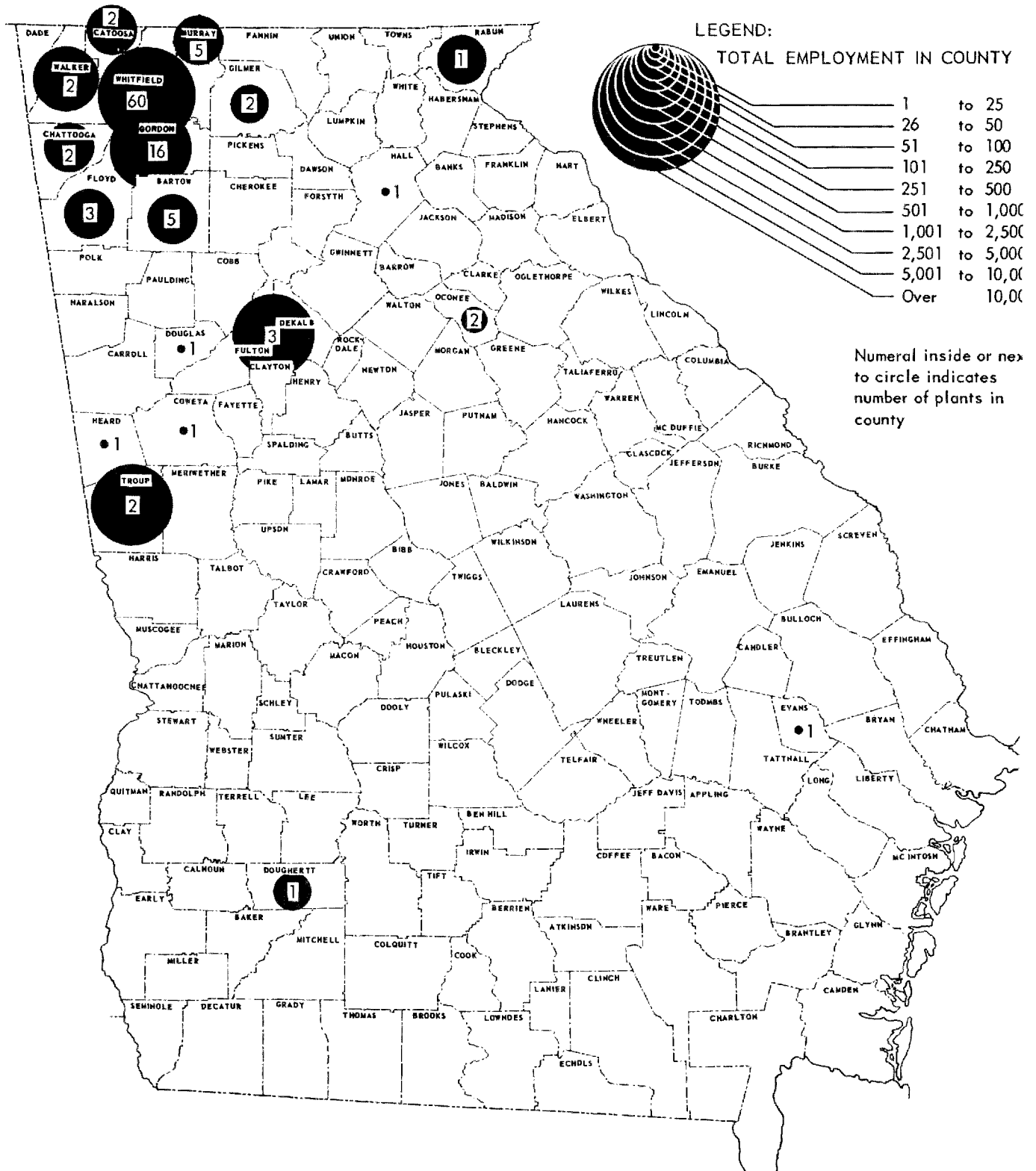
Nearly 80% of the plants and 70% of the workers are engaged in the manufacture of full fashioned and seamless hosiery. Generally, hosiery mills are small operations; 45% of the plants employ fewer than 51 workers; 65% employ fewer than 150. The remaining 35%, each employing over 150 workers, account for 80% of all employment in the hosiery industry, however. Mills making seamless hosiery outnumber the full fashion mills by 4.3 to 1.

Knit underwear mills tend to be large operations -- only one plant employs fewer than 100 workers, while one employs almost 1,000 workers. By comparison, the largest hosiery operation averages about 700 workers. The six underwear plants are located in Bartow, Jenkins, Macon, Monroe, Towns and Upson counties.

Knit outerwear, gloves and mittens, and knit fabric are other products manufactured in the State, but as yet there has been only limited diversification into these lines. The three mills producing outerwear are located in Brooks, Gwinnett and Spalding counties. The knit fabric operation is located in Carroll County, and the manufacturer of knit gloves and mittens is located in Clayton County.

Georgia's largest knitting mills, employing 450 or more workers each, are The William Carter Company, Thomaston (underwear); E-Z Mills, Inc., Cartersville (underwear); Griffin Jaco Mills, Griffin (underwear and outerwear); Richmond Hosiery Mills, Rossville (seamless hosiery); Spalding Knitting Mills, Griffin (seamless hosiery); and Union Manufacturing Company, Union Point (seamless hosiery).

MAP 20-C FLOOR COVERING MILLS



TEXTILE MILL PRODUCTS

Floor Covering Mills

The manufacture of rugs and carpets is the third ranking segment of the State's textile industry, accounting for 32% of all plants and 13% of the employment. Georgia has nearly 12,800 persons employed in 111 floor covering mills.

All of the rug and carpet operations are located in north Georgia with the exception of two mills -- one in Dougherty County and one in Evans County. Moreover, seven-eighths of the mills and two-thirds of the employment are found in nine northwest counties: Bartow, Catoosa, Chattooga, Floyd, Gilmer, Gordon, Murray, Walker and Whitfield.

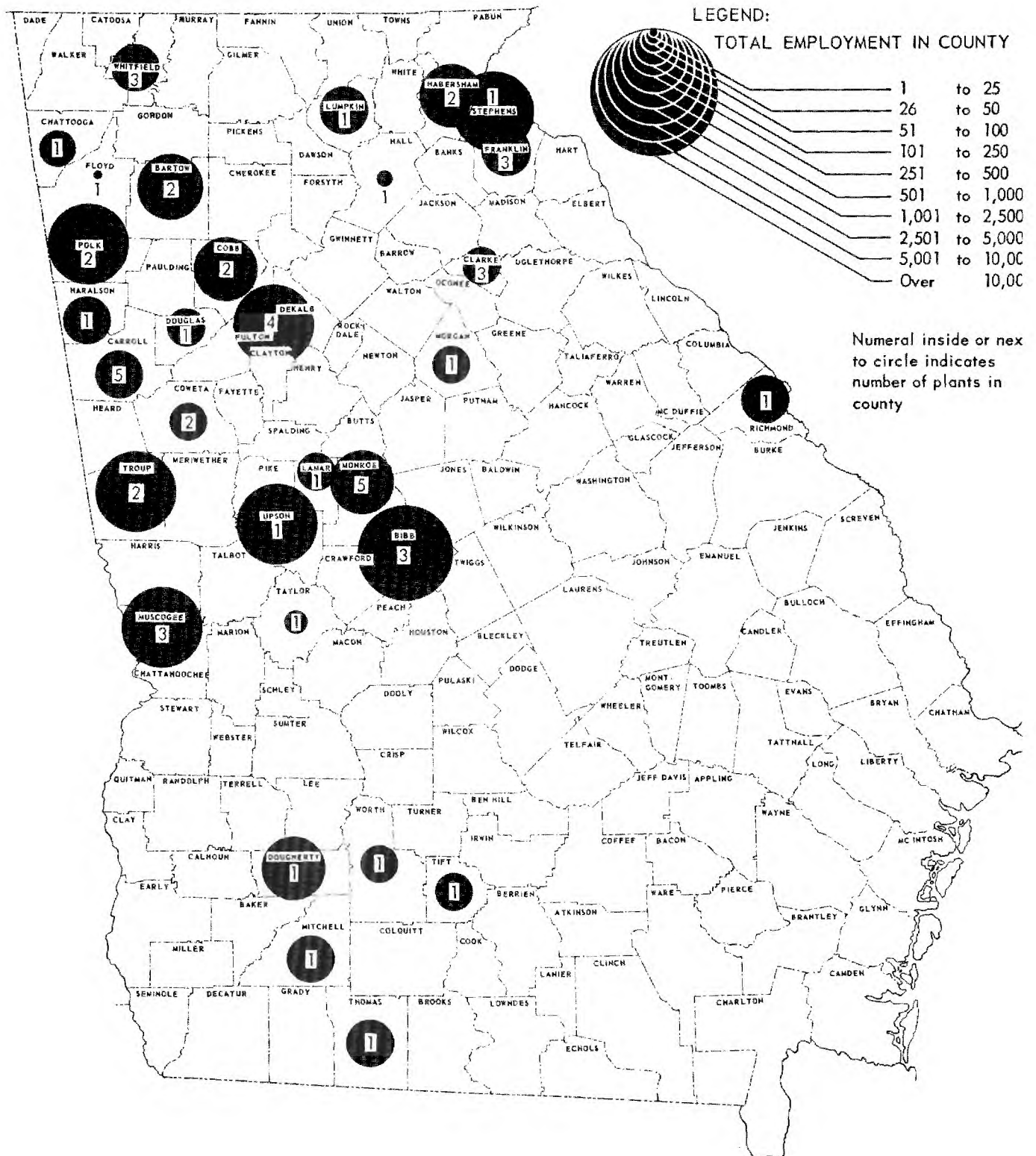
Whitfield County, the industry's center, has 60 plants -- all tufted mills -- employing over 3,600 workers. Troup County ranks second to Whitfield in total employment, with 18% of the rug and carpet workers employed in only two plants. Troup has the largest tufted mill in the State. Gordon County is second in total number of plants (16) but third in employment (2,100). Together these three counties account for 63% of total employment (8,000) and 70% of all mills (78).

All but eight of the floor covering mills in Georgia are tufted operations. They employ 90% of the workers. Of the eight non-tufted operations, six manufacture woven carpets and rugs, one makes braided rugs, and one produces rug filler. The woven operations are located in Bartow, Dougherty, Fulton, Gilmer, Murray and Troup counties. The other two plants are in Oconee County.

Carpet mills provide jobs for only one-fifth of the workers in the rug and carpet industry. Individual plants are small -- particularly tufted operations with nearly three-fourths of the plants employing less than 100 workers.

Seven of Georgia's rug and carpet mills employ over 500 workers each. They are Barwick Carpet Mill, LaFayette (tufted carpets); E. T. Barwick Mills, Inc., Chamblee (tufted carpets); Cabin Crafts, Inc., Dalton (tufted carpets); Callaway Mills Company, LaGrange (tufted carpets); Callaway Mills Company, LaGrange (woven rugs and carpets); Dixie Bell Mills, Inc., Calhoun (tufted carpets); and Lawtex Corporation, Dalton (tufted carpets).

MAP 20-D
YARN, THREAD & CORD MILLS



TEXTILE MILL PRODUCTS

Yarn, Thread and Cord Mills

Yarn, thread and cord mills rank second to fabric mills in importance to Georgia's textile industry, with 18,750 working in 58 plants. Except for the five plants located in Dougherty, Mitchell, Thomas, Tift and Worth counties, all of the plants are located in the Piedmont area of the State. Slightly more than half of the mills are medium-sized (employing from 100 to 500) while one-fourth employ less than 100 workers. However, the remaining one-fourth (those employing more than 500) account for 60% of all employment in the yarn, thread and cord mills.

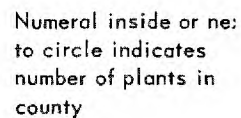
Yarn mills are the most significant of this segment, with 71% of the plants and 56% of the workers. The least significant are the thread mills, representing only a sixth of the workers and a tenth of the plants.

Coats & Clark, Inc., operates all but one of the State's thread mills, with plants located in Cobb, Dougherty, Mitchell, Stephens and Thomas counties. The other plant, American Thread Company, is located in Haralson County.

Goodyear Tire and Rubber Company operates four of the six tire cord and fabric mills, with two plants in Polk County and one each in Bartow and Lamar counties. The other two are located in Muscogee (Bibb Manufacturing Company) and Upson (B. F. Goodrich & Company).

Georgia's three largest mills, each employing over 1,000 workers, are Bibb Manufacturing Company, Macon (yarn); Coats & Clark, Inc., Toccoa (thread); and B. F. Goodrich & Company, Thomaston (tire cord and fabric).

TRANSPORTATION EQUIPMENT



TRANSPORTATION EQUIPMENT

The manufacture of transportation equipment is Georgia's fifth ranking industry, with 88 plants employing more than 27,000 workers. Less than 8% of all industrial employment in the State is engaged by this industry, however. Nationally, Georgia ranked 17th in 1958 among the states in the production of transportation equipment, with nearly 2% of the industry's total employment.

Geographically, the industry is well dispersed over the State with plants located in 42 counties, but from the viewpoint of total number of workers, only three counties (Cobb, DeKalb and Fulton) account for over 80% of the total. Five counties -- the above three, plus Chatham and Hart -- account for a little over 90% of all employment. The production of motor vehicles and equipment and aircraft are the two most significant product lines represented; together they account for 93% of all workers in the transportation industry.

The Lockheed-Georgia Company plant in Cobb County employs more than 12,000 workers. The four automobile plants -- Chevrolet, Fisher Body, and Ford in Fulton County, and Buick, Pontiac and Oldsmobile in DeKalb -- employ nearly 9,000. Throughout the State, an additional 3,900 are employed in the production of truck and bus bodies, truck trailers, trailer coaches (mobile homes), and motor vehicle parts and accessories. Fifty-one plants located in 24 counties comprise the State's motor vehicle and equipment complex.

Ship and boat building and repair is the third ranking product line in Georgia's transportation complex, with 27 plants employing nearly 2,000. Chatham and Glynn are the centers of the shipbuilding and repair operations. Boatbuilding and repair operations, however, are located in 13 counties, with Fulton and Charlton leading in total workers employed.

The manufacture of industrial trucks, golf carts, hunting wagons, boat trailers and the repair of railroad tank cars are other types of transportation equipment operations found in Georgia.

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